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The Journal of the Fire Protection Profession

SEPTEMBER 17, 1930

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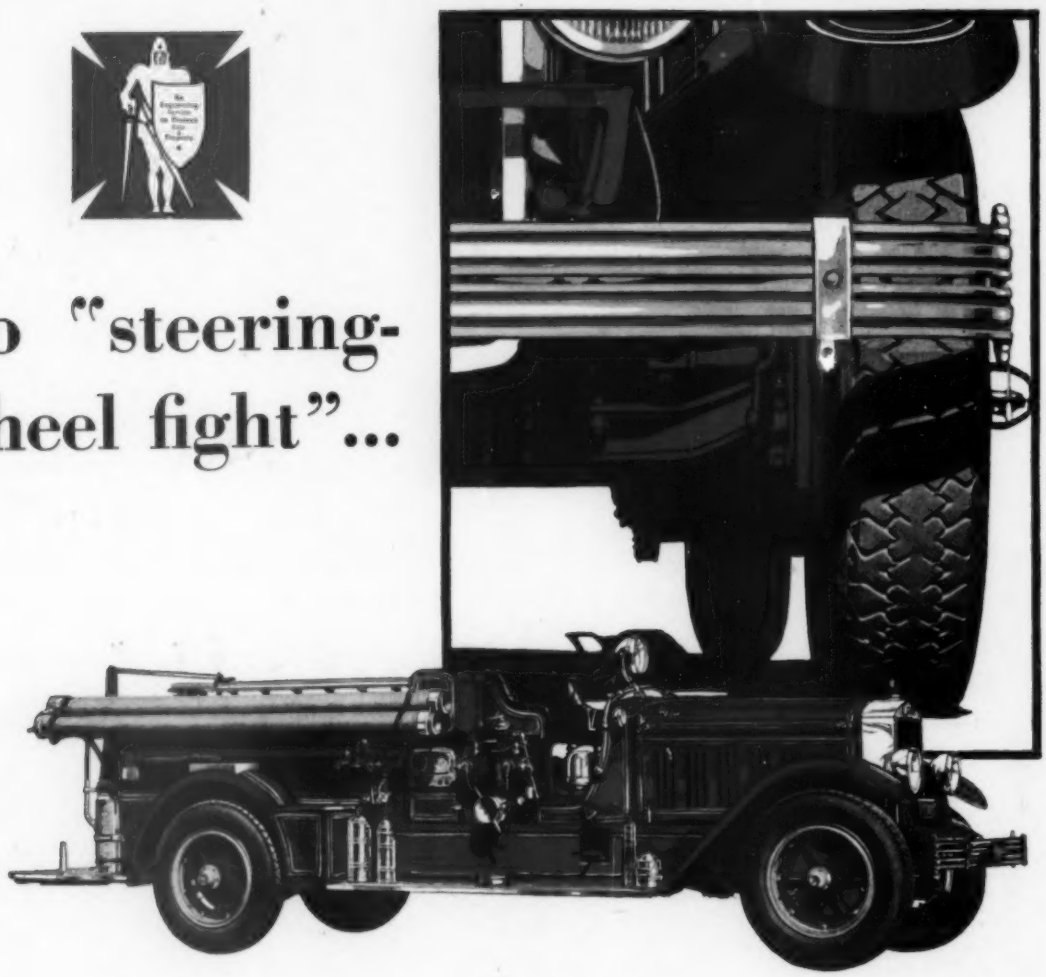

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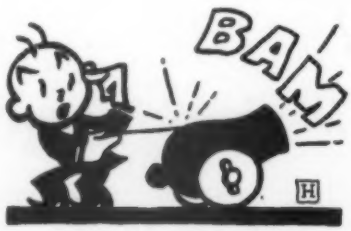

A Theory Exploded

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¶ All we can deduct from this, then, is that fires apparently keep occurring with even more constancy than death itself. With everything else on the decrease, we'll be mighty surprised if fire department activity this year doesn't show a substantial increase. That's where the fire game is different!

The Publishers

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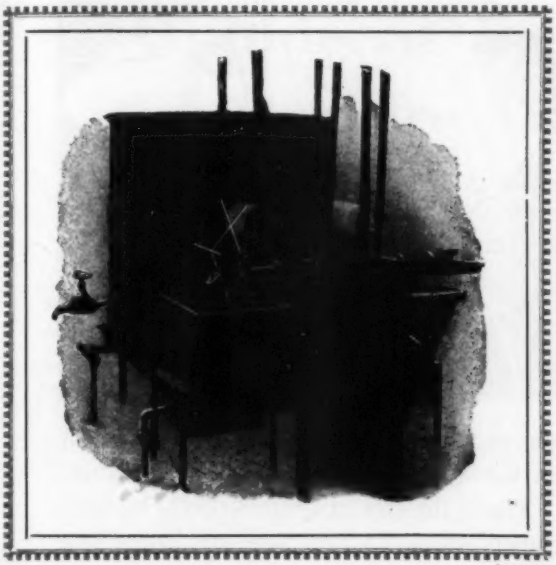

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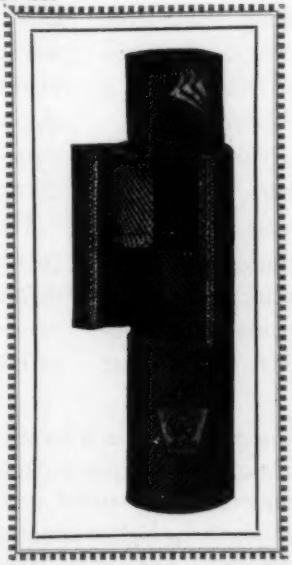

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FIRE ENGINEERING

(A Consolidation of Fire and Water Engineering and The Fire Engineer)

The Journal of the Fire Protection Profession

VOLUME LXXXIII SEPTEMBER 17, 1930 NUMBER 19

Attitude of the Courts Toward Fire Ordinances

Decisions of Judges in Cases of Fire Hazard, Zoning, Parking and Other City Laws—Other Important Cases Decided

By LEO T. PARKER, Attorney-at-Law

IT is well settled that a municipal ordinance is valid and enforceable by the terms of which the chief of the fire department is given authority to approve licenses which shall be issued to persons who conduct business enterprises having unusual fire hazard. This point of the law was discussed in detail in the recent case of State vs Common Council of City of Racine, 230 N. W. 70.

In this case the controversy involved the validity of a city ordinance which provided that in order to obtain a license to operate a filling station the application shall specify the location of the building, structure, premises, enclosure or other place in which it is proposed to keep such filling station, and the capacity or capacities in gallons of the container or containers, tank or tanks. It is also provided that the council may, in its discretion, secure the recommendation of the chief of the fire department to authorize the issuance of such license, and that twice a year the chief of the fire department shall inspect the filling station and see that there is no dangerous accumulation of waste or other combustible material on the premises.

The higher Court indicated the validity of this ordinance, and said:

"The ordinance as a whole clearly reveals its purpose to be that of protecting the city from the fire hazard incident to the operation of such stations, so far as the same is dependent upon their location and the accumulation of waste. Within this field the council no doubt had broad discretion, and while acting within this field the action of the common council in denying the application would carry with it the presumption of a reasonable exercise of that discretion."

When Zoning Ordinance Is Void

On the other hand, it is interesting to observe that various Courts have held that an ordinance is invalid which unreasonably discriminates between locations of filling stations, particularly where such discriminations are not necessary for the purpose of reducing fire hazards.

For instance, in Continental Co. vs. City of Twin Falls, 286 Pac. 353, the Court considered the following ordinance:

"It shall be unlawful for any person or corporation to construct and operate within 500 feet of the grounds occupied by any public school buildings a public service station where gasoline is sold and delivered to motor vehicles. . . .

In holding this ordinance invalid the Court stated the following important law:

"Said ordinance is invalid for the reason that it is discriminatory in that it does not apply to all businesses of the same class. Upon its face, the ordinance is designed to regulate the construction, maintenance, and operation of gasoline service stations of the drive-in type only. If it is intended to regulate the sale of gasoline as a 'dangerous' or 'obnoxious' business, its provisions do not cover garages, stores, or other places where gasoline is retailed by means of a curb pump, and the customer does not drive across the sidewalk."

Validity of Ordinance Regulating Parked Automobiles

Since in many instances fire department officials have occasion to ask for strict enforcement of city ordinances regulating parking of automobiles, the recent case of Haggenjos vs. City of Chicago, 168 N. E. 661, presents unusual interesting legal information.

It is important to know that various Courts have held that the primary use of the streets is for purposes of travel, and while the paramount right to the use of a street in all its parts is in the public, yet such right is *not* an absolute right at all times but is subject to such incidental and temporary or partial obstruction of the street by others as manifest necessity may require.

For example, the owners of lots bordering upon streets have the right to make all proper and reasonable use of the parts of the streets upon which the lots abut for the convenience of the lots, not inconsistent with the paramount right of the public to the use of the streets in all their parts.

The delivery of merchandise, fuel or other articles, at business houses on a street, is a necessary incident to the use of a public highway. The streets of a city would be of comparatively little use, if merchants could not deposit their goods in them temporarily in their transit to the storehouse, or if vehicles carrying their goods could not stand on the street in front of their stores to deliver goods transported.

"The ordinance as a whole clearly reveals its purpose to be that of protecting the city from the fire hazard incident to the operation of such stations, so far as the same is dependent upon their location and the accumulation of waste. Within this field the council no doubt has broad discretion, and while acting within this field the action of the common council in denying the application would carry with it the presumption of a reasonable exercise of that discretion."—Court Decision.

Therefore, the law is well established that a merchant may use and temporarily obstruct the street and sidewalk in front of his premises for loading and unloading goods, if he does not unnecessarily or unreasonably interfere with or inconvenience the traveling public. So automobiles and other vehicles may be used for the same purpose, and automobiles, or other vehicles, may not be absolutely prohibited from so occupying the sidewalk or street.

However, the city may, in the general control of its streets, regulate the use of all horse drawn and motor vehicles and prescribe the time, place, conditions and circumstances of parking. However, it has no right to interfere with their use except in the enforcement of an ordinance or in pursuance of judicial process. Moreover, city ordinances which regulate parked automobiles, in order to be valid, must be reasonable and not oppressive and discriminatory.

In the above case the validity of a city ordinance was contested which provides that no person, owning, controlling, or operating any vehicle should permit it to stand on any public street or alley, within a prescribed congested district of about 72 square blocks, between the hours of 7 o'clock in the morning and 6:30 in the evening, except on Sundays, certain holidays, and on Saturdays after 3 o'clock in the afternoon. The ordinance expressly provided that it should not apply to ambulances or emergency vehicles of the city, the federal government, or the county, or to public utilities while the operator of any public utility vehicle was engaged in the necessary performance of emergency duties.

A citizen violated this ordinance by leaving his automobile standing on a street in front of the entrance to a building in which his office was, at a place within the district described in the ordinance, while he went to his office and remained in consultation with a client for about 30 minutes, from 2:20 to 2:50 in the afternoon. Upon returning to the street, as he was about to enter his automobile, he was arrested for a violation of the ordinance. Upon a trial by jury in the Municipal Court he was found guilty and was fined $5.00 and he appealed to the higher Court.

The higher Court reversed the lower Court's decision and held this ordinance invalid and unenforceable, stating in detail the law, as follows:

"It is not open to question that the Legislature has conferred upon the city the power to regulate the use of the streets and the traffic upon them—that is, the passage of persons and vehicles back and forth upon them—and to prevent obstruction of them. . . . There can be no doubt about the power of a municipality to control travel upon its streets. Such regulations, on account of the crowded condition of the streets, are a necessity for the safety and welfare of the public as well as the convenience of the travelers. . . . Without a regulation of traffic and of parking vehicles, the use of congested streets would become dangerous, if not impossible. Parked vehicles, occupying both sides of the street, constitute obstructions to travel, and seriously reduce the capacity of the streets for use by ordinary street traffic in the usual way. . . . It was the duty of the city council to determine what regulation was required for the public welfare, and the only limitation on the exercise of its power was that such exercise should be reasonable. The question for determination, therefore, is whether the prohibition of standing vehicles on the streets throughout this territory, whose dimensions are said to be eight blocks by nine—that is, we may presume, more than a half mile in each direction—during the whole of every business day, was reasonable or not. Ordinances prohibiting the parking of vehicles in certain restricted localities between certain hours, or at all times, or limiting the parking privilege to an hour, to 30 minutes, to 20 minutes, are common, and have been sustained. . . . It might have been a reasonable exercise of power by the council to restrict the right to stand on the streets to a short time, or to prevent it altogether at certain hours and in certain parts of the territory, but it was not a reasonable exercise of the power to prohibit the standing of any vehicle on the streets for any purpose, or for any time, so as to prohibit throughout all the business hours of every business day the free use of the streets, in a reasonable way, to the people within the territory mentioned, and those desiring to transact business with them, to have reasonable and convenient access by automobile to the various parts of the territory described in the ordinance for the transaction of business and the receipt and delivery of goods in the ordinary way."

Fire Department Now Invades Baby Parades

Each year, a baby parade of considerable note is staged at Asbury Park, N. J., just before the end of the summer season. One of the winners had an exhibit of three prancing horses tugging at an old fashioned steamer. The float was fittingly labeled, "Gone But Not Forgotten."

Mayor's Appointment of Fire Commissioners Held Invalid

Ordinarily, the higher Courts interpret conflicting state laws for the best interest of the public, as well as to construe the intended meaning of the law-making bodies which passed the laws. This rule is particularly applicable with respect to laws that regulate the removal and appointment of municipal officials.

For illustration, in State vs. Hartwig, 230 N. W. 42, it was disclosed that the fire commission of the city of Watertown is composed of five members appointed pursuant to the provisions of a state law, which provides:

"Each city shall have a board of fire commissioners consisting of five citizens, three of whom shall constitute a quorum. The mayor shall annually, between the last Monday of April and the first Monday of May, appoint in writing, to be filed with the secretary of the board, one member for a term of five years."

Another state law provides that appointments by the mayor shall be subject to confirmation by council, unless otherwise provided by law, and still another law gives the mayor power to remove any officer appointed by him without confirmation when he deems it for best interests of the city.

The mayor filed charges against the chief with the commission. Three members of the commission had been appointed by the mayor's predecessors in office. After filing the charges against the chief, the mayor served written notice on each of the three commissioners appointed by his predecessors stating that he had removed each of them from the office of fire commissioner. Thereafter he filed with the secretary of the fire commission written appointments to take the place of the commissioners who were notified by him that they had been removed from office. Suit was filed to prevent the mayor from appointing the new members.

During the trial it became evident that the final outcome of the litigation was dependent upon the solution of the question whether the members of the fire commission can be removed by a mayor without charges being made against them and action taken thereon by the common council. In other words, if the mayor had no power to remove the members without such hearing, no vacancy existed and the mayor had no power to appoint the other members in the place of those whom he attempted to remove from office.

It is interesting to observe that the Court held the mayor without power to remove and appoint new members of the commission, saying:

"It is clear that it was the legislative intent to give to the members of the commission a fixed and definite term of office so that they could not be removed, except upon hearing and cause shown. . . . In the absence of a clear expression of legislative intention to change this well established rule of the common law, it must be assumed that the Legislature intended to confine the power of removal at pleasure to those cases where there was an absence of both confirmation by the common council and a fixed term of office. . . . If each incoming mayor may at pleasure remove any or all of the members of the commission without cause and without hearing, the tendency will be to reestablish the very conditions which it was the purpose of the Legislature to remove when it passed the law providing for the creation of the fire commission. The Court holds that the statute requires that the appointment of the fire commissioners be confirmed by the common council. It follows that the mayor had no power to remove commissioners without cause being shown and a hearing before the common council. There were therefore no vacancies created by the mayor's attempt to remove the members of the commission appointed by his predecessors, and he had no power to appoint new members of the commission."

Bond Bidder Bound to Accept Bonds

One of the most important recently decided higher Court cases involving the sale of municipal bonds for fire department purposes is Kern vs. City of Mt. Sterling, 25 S. W. (2d) 41.

In this case it was disclosed that a municipality needed new fire extinguishing apparatus and machinery, as well as improved quarters for housing it and for the use of the firemen. It was

(Continued on page 827)

Wholesale Produce Market Presents Unusual Fire Problems

Questionable Construction Makes Careful Work Imperative —Contents Frequently Determine Method of Fighting Fire

THE usual type of wholesale produce market represents about the worst type of construction encountered in fire fighting operations. The fact that the contents of the market building are rarely of high value, and the rapidity of turnover of stock on hand, makes expensive buildings unnecessary. A great number of such establishments in New York, and other large cities, occupy converted apartments or dwelling houses, brick and wood joist buildings of inferior construction, and even frame constructions.

As a rule, such buildings were not designed to carry great loads, and they are frequently burdened with far greater weight than good practice justifies.

The explanation of this is quite simple: many such buildings were changed over for other occupancy of comparatively light weight, or were converted into markets for handling light produce. Change in tenant does not necessarily mean change in building and as a result many buildings which were originally designed for light occupancy are found to be filled full of heavy materials such as tub butter, lard, canned goods, etc.

The produce market is ideal for rapid spread of fire, there being openings from the basement to the top floor without protection. Hoists, for they can be classed as nothing else, usually consist of very inexpensive open elevators so designed as to permit the maximum space for loading and unloading goods.

Occasionally the floors are found oil-soaked, either due to carelessness or to previous occupancy; and incidentally such conditions insure fast spread of fire.

Many of the buildings have marquees extending over the sidewalk, and this feature alone adds considerably to difficulty in operating at such fires. Electric wiring is usually of an inferior grade, with much open wiring in evidence. The hazards incidental to this condition are fully appreciated by men operating at fires in such establishments.

Heavy doors, as a rule, are encountered. They are usually of large area to permit easy removal of materials. Frequently the doors are locked with heavy padlocks, and in other cases by ordinary door locks. In many instances the large doors are locked on the inside with padlocks, hasps, hooks, etc., and in such case it is a very difficult job for the fire department to open them. However, where such doors are locked on the inside there is usually a small auxiliary door alongside the main door, or leading to the office, which may be used for entrance by the fire force.

The contents of the building are responsible for the fire fighting problems as encountered. For example, large quantities of oil, such as olive oil, may be stored within the building, or lard, butter or other fats. Again, the building may be well stocked with spices, coffee, tea, etc. The burning of different materials of course create different hazards and as a result each fire has its own characteristics.

Fighting the Fire

Dense smoke is commonly found around such a fire irrespective of contents of building. But the intensity of the fire depends upon the materials present.

Assuming a building of average construction, which would be brick with wood joists, wooden floors, open shafts and open stairways leading through the various floors, and the building overstocked with produce, the following is a general outline of the methods followed by the fire department:

If the building is fully involved upon the arrival of the department, and where fire starts in the night and nobody is at hand, quick opening up for ventilation is necessary in order to clear the atmosphere within the building so fire department forces can operate at close range. This operation is not a difficult one because such buildings are not usually more than four stories in height and more frequently three stories. Open up scuttles, skylights, or other roof vent covers, and then open windows on various floors as conditions may require. Windows on upper floors may be opened by men on roof, using six-foot hooks. Window panes in such buildings are usually inexpensive and may be broken without severe loss, if windows cannot be opened otherwise.

Inside Work Not Feasible at This Fire

When a five-story wholesale produce establishment burned in Brooklyn last January the fire department had quite a di..cult task on its hands. Conditions made it necessary to drown out the fire. This particu'ar blaze was charged against a sleeping watchman, whom the firemen had to wake up and escort from the building.

Effect entrance at street floor as promptly as possible so that lines may be in position to follow in as soon as ventilation is started.

With the exception of the office, which is usually par-

titioned off, the various floors are open spaces from end to end and side to side. Therefore the fire fighting problem is a comparatively simple one. It requires but the prompt use of streams in wetting down the burning material and in extinguishing the fire.

One precaution to be observed: when materials are afire which absorb water, or where the floors are heavily loaded, men should not be permitted to enter ground floor unless it is certain that there is no danger of floors above collapsing. Weakening of wooden floor beams by fire below may result in sudden failure of floors above and unless officer in charge is on the alert, loss of life, or injury to men, may result.

HOW INSPECTION CAN PREVENT FIRES IN BUSINESS STORES

Eliminating Fire Hazards Not Only Helps Store Owner, But Also the Entire District — Some Suggested Arguments

By CLAYTON L. BARGREN
Rockford, Ill.

IT must be realized that eliminating fire hazards from the store, safeguards the owner from loss from that cause, and helps the whole surrounding district because of the remedied change. However, there are business men who do not vision the results which can be obtained in this elimination work, yet who want positive and immediate results in combating any fire which starts in their place of business. It is these individuals with whom the Chief or the Fire Inspector can do good missionary work for fire prevention.

Business men must be instilled with the actual property and good will dangers, by a continual prevention campaign. Because of the very rapid progress in the commercial field, and that of fire administration, new hazards are developing daily. Different types of business interest us more than others, due to the fact that each has its individual problem in fire control. Carelessness, and unfamiliarity of simple fire hazards are our biggest problems with which we have to deal in the business district. There are court records to show that adjoining property loss has been collected from the owner, in whose building the fire started through carelessness.

Some such argument as the following can be used in dealing with the business owner: You cannot afford to lose the time wasted in burning out, as your competitors will absorb your customers. You will lose your source of income, and parts of your merchandise not covered by insurance. Probably loose money, trinkets, valuable papers and accounts will be destroyed. You will lose caste among your business associates because of your carelessness. You will have that smoke-smell in your building for months afterwards. Your stock loss is only paid on the list price of your goods. Smoke and water loss is only a percentage of the list price, so through handling your goods, salary, and overhead you have ended up with no profit for all your trouble. If you have a large fire, your employees are thrown out of work until business is resumed, thereby cutting off their source of income. It would be well to impress this fact upon the employee, so that he realizes that in eliminating fire hazards he is protecting himself against loss of work.

Some day in the near future large department stores and businesses must have a designated fire chief in control, in eliminating hazards, and for the safeguarding of life and merchandise.

Pastor Averts Panic Among Infirm Folk

Two floors of the boys dormitory at the Orphans Home and Asylum for the Aged and Infirm of the Evangelical Lutheran Church, Philadelphia, were swept by flames. Twenty-five of the fifty-three boys in the building escaped by way of exterior fire escapes. The other children were playing in the yard at the time. The Pastor succeeded in averting a panic. Occupants of other structures on the grounds left their rooms without any disorder. The upper photograph shows the building and children after the department responded. Lower, damage done to one of the rooms.

New York Wants Taller Firemen

New York City has raised its entrance requirements to the New York Fire Department so that the shortest applicants must be one inch taller. Under the new requirements, the prescribed minimum height for firemen is five feet and seven inches.

It is believed that the new requirement will not become effective for at least two or three years since it did not apply to the 4,800 candidates for the department who took their civil service examinations early this year. Of the number who took the examination it is believed that between two and three thousand will make the list.

The head of the civil service commission pointed out that the city is now paying a minimum salary of $3,000 a year, and that the city can now ask more for its money.

New Jersey Chiefs Meet Sept. 19

The annual meeting of the New Jersey State Fire Chiefs' Association will be held in Atlantic City, on Friday, September 19 at 8 p.m. The meeting will be held in the new Atlantic Auditorium located on the Boardwalk, a short walk from the Million Dollar Pier. Officers will be elected and reports presented of the work accomplished by the standing committees.

Westfield, Mass., to Receive Ladder—Westfield, Mass., is expecting the early delivery of a Seagrave ladder truck.

Bloomfield, N. J., to Erect Fire Station—Ground has been broken in Bloomfield, N. J., for the erection of a new fire station.

Chicago to Erect Patrol Building—Work has started on a $75,000 building for the Chicago Fire Patrol. Chief Frank McAuliffe said that the new building will house sixteen men.

Jackson, Miss., Buys Fire Apparatus—In the August 20 issue there appeared a news item that Jackson, Mich., purchased Mack fire apparatus for $23,300. The paragraph should have read Jackson, Miss.

Aerial Delivered to Westfield, Mass.—A 75-foot Seagrave aerial ladder has been delivered to Westfield, Mass. This is the second piece of apparatus to be delivered to the city in one month.

Lynchburg Department is Undermanned—According to a report made public by the National Board of Fire Underwriters, the fire department of Lynchburg, Va., is undermanned and the ladder service is seriously inadequate. There is a provision in the current city budget to provide additional ladder service.

Fire Chiefs Officially Launch Educational Program

First of Topics Received with Enthusiasm at Winnipeg—Sullivan Elected President; Brosnan and Smith, First and Second Vice-Presidents—Havana Next Year—400 Chiefs in Attendance

PRACTICALLY the entire program of the fifty-eighth annual convention of the International Association of Fire Chiefs held at Winnipeg, Manitoba, on September 9th-12th was devoted to the Educational Committees' Course of Instruction.

Chief Joseph N. Sullivan
President
Utica, N. Y.

Chief D. W. Brosnan
First Vice-President
Albany, Ga.

The subjects presented, based largely on the work of the Los Angeles Fire College, and delivered by instructors of that institution, proved a revelation to the delegates, and indicated in a most promising manner the possibilities of the Educational Program.

Along this line, an interesting feature of the convention was the showing, on Wednesday morning in a local moving picture theatre, the association's new talking film on Salvage Work. This picture, the films of which it is hoped to be able to distribute in about two months, shows every branch of salvage and the vocal explanations are by no less an authority on the subject than Chief Frank C. McAuliffe, of the Chicago salvage patrols.

In the election of officers on Friday the association followed out its traditional policy, advancing its First Vice-President to the Presidency, and promoting the Second to First Vice-President. Chief Joseph N. Sullivan, of Utica, N. Y., was elected President; Chief D. W. Brosnan, of Albany, Ga., First Vice-President and Chief Richard L. Smith, of Pittsburgh, Pa., Second Vice-President. Chief James J. Mulcahey, Yonkers, N. Y., was re-elected Recording Secretary, and Ex-Chief Peter Carter was re-elected Treasurer.

Havana won the fight for the convention for 1931. The Cuban city made a bid for the convention last year, but withdrew in favor of Winnipeg.

Unfortunately, in the case of the exhibits, while the best arrangements possible under the circumstances were made for their display, the armory was so far away from the meeting hall that, with the exception of Thursday afternoon, they were not as well attended as they should have been. To make up for this deficiency, however, Thursday afternoon was set apart for the chiefs to visit the exhibit hall, and this was taken advantage of by the majority of the members.

Opening Session

As usual the first session of the Fifty-eighth Annual Convention of the International Association of Fire Chiefs was devoted to opening ceremonies. Approximately five hundred delegates were on hand on Tuesday, September the 9th, at the Capitol Theatre, Winnipeg. The meeting was called to order by President Ralph J. Scott. Following the introduction of distinguished guests Mayor Ralph H. Webb of Winnipeg delivered the address of welcome, Chief Selden R. Allen of Brookline, Mass., responding thereto.

In the Memorial Exercises which followed it was disclosed that during the past year fifty-three members of the Association had departed this life.

Chief Richard L. Smith
Second Vice-President
Pittsburgh, Pa.

Chief D. A. Boulden
Winnipeg, Man.
Host to the Convention

Afternoon Session

Just prior to the opening of the afternoon session the delegates viewed a parade by the Winnipeg Fire Department.

The business session started at 2 o'clock with the presidential message of Chief Scott.

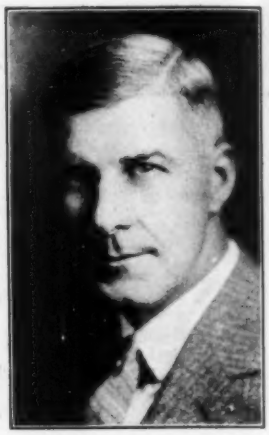
He pointed out the necessity for vigorous action on the subject of finance in order that the educational program of the Association may be carried to completion without interruption or delay. He pointed out the progress that had been made since the educational program was initiated last fall and expressed belief that this activity of the organization would be the turning point in its career. Two talking picture films have already been completed and several others are contemplated for early action.

President Scott urged co-operation on the part of the membership in putting over the program.

Chief Ralph J. Scott
Retiring President
Los Angeles, Cal.

Chief James J. Mulcahey
Recording Secretary
Yonkers, N. Y.

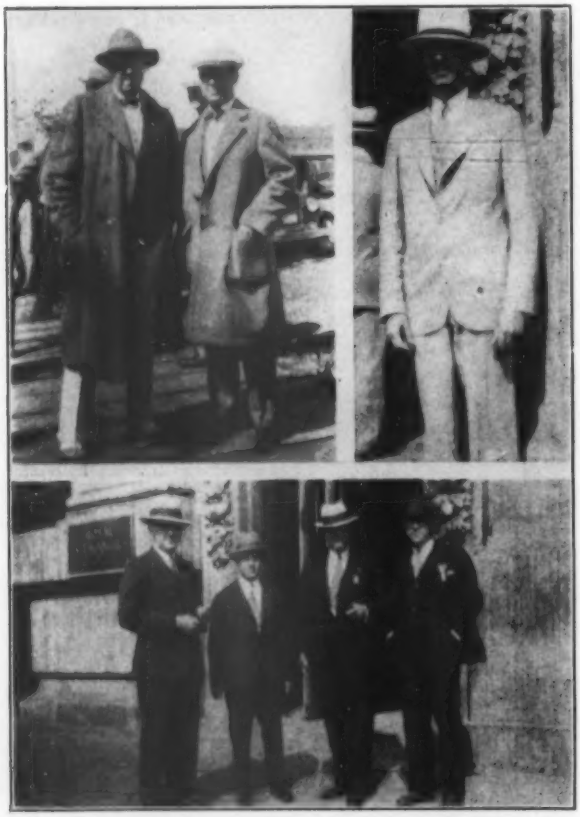
Ex-Chief Peter Carter
Treasurer
Camden, N. J.



Jay W. Stevens
Executive Secretary
San Francisco, Cal.

As the first part of the Business Session the various Convention Committees were announced. They are as follows:

Committee on Credentials
Selden Allen, Chief, Brookline, Mass.
Chas. Thompson, Chief, Vancouver, B. C.
W. H. Funderburk, Chief, Springfield, Ill.
Frank H. Miller, Chief, Terre Haute, Ind.
Joe W. Fisher, Chief, Covington, Ky.



Snapped at the Fire Chiefs Convention

Upper Left Picture: C. B. Rose, President, American-LaFrance & Foamite Industries, Inc., and (right) J. H. Green, President, Eureka Fire Hose Manufacturing Co. Upper Right Picture: A. G. Sullivan, Manager Motor Apparatus, American-LaFrance & Foamite Industries, Inc. Lower Picture: E. G. Rumsey, Master Mechanic, Detroit Fire Department; O. E. Hearn, Master Mechanic, Washington, D. C., Fire Department; Chief S. J. DeMay, Detroit, and R. G. Browning, Mack Trucks, Inc., New York.

Committee on Naming Vice Presidents
James Armstrong, Chief, Kingston, Ont.
Chas. Ringer, Chief, Minneapolis, Minn.
Jas. J. MacMillan, Chief, Orange, N. J.
H. R. MacMillan, Chief, Jacksonville, Fla.
Hugo R. Delfs, Chief, Lansing, Mich.

Committee on Courtesies Extended
W. A. Buel, Chief, Parsons, Kans.
L. Donnelly, Chief, Quebec City, Que.
J. W. Sutherland, Chief, Fargo, N. D.
Geo. B. Goff, Chief, Oklahoma City, Okla.
G. W. Andrews, Chief, Sudbury, Ont.

In addition, the Memorial Resolutions Committee, of which Chief John Healy of Denver is Chairman, and a special Committee on Finance, of which Chief D. W. Brosnan is chairman, were announced.

Chief R. N. O. Harrington of the McColl Refineries, Montreal, Quebec, was appointed Sergeant at Arms.

Reports of Secretary and Treasurer as well as the Auditing Committee were read and approved.

Communications were read, among which was a cablegram from Chief John Kenlon, who is now in Ireland, wishing the Association a successful convention.

Proceedings to Be Issued Earlier

Upon motion by Chief Shire, it was unanimously voted that the proceedings of annual conventions hereafter be issued in sufficient time that each member may receive his copy sixty days in advance of the annual meeting.

In answer to a question regarding the finance of the Association, Chief Brosnan made a stirring address on this phase of the Association's activity. He stressed the tremendous importance of the educational program, and labelled it as the first big movement the Association had ever sponsored, and one which would accomplish more for the future of the organization than any other move ever undertaken. He expressed his confidence in the ability of the Association to successfully handle the problem of securing revenue necessary to carry on with the work.

Educational Committee Program

The first topic of the program sponsored by the Educational Committee of the Association, entitled "How a Fire College Should Be Conducted," was delivered by Captain W. W. Tebbetts of the Los Angeles Fire Department ,and one of the instructors of the Los Angeles Fire College.

He reviewed the changing conditions of industry and the resultant introduction of many new hazards to be faced by fire fighting organizations. Strategy, he contended, was the basis of all fire fighting.

A description of a Los Angeles Fire College, at which the first class of students were instructed under the auspices of the International Association of Fire Chiefs was given.

The talk was fully illustrated with lantern slides and proved of great interest to the delegates.

Teaching How to Teach

As a second topic on the afternoon's program Doctor Moore of the Success Business College of Winnipeg, outlined the essentials of a successful instructor.

"Three fundamental requirements are essential in the

(*Continued on page* 816)

THE ROUND TABLE

For Practical Discussion of Current Fire Department and Fire Management Problems

NIGHT driving has become very popular, especially so during warm summer evenings. After dusk it is not possible to distinguish objects unless picked up by the headlights of the automobile or if the object is itself illuminated.

That is why it is often so difficult to be warned of the approach of fire apparatus. White beams of lights that pierce the darkness of the road ahead do not indicate any characteristic classification. All white lights appear alike when viewed at a distance.

It is therefore necessary that some distinguishing mark be used such as a ruby lens on a special headlight. But whatever scheme is adopted, it is necessary that it should be considered standard in all cities to avoid confusion. A motorist respects a red light as a stop signal when part of a traffic system, and in the same way he should be educated to respect a certain illuminated sign on fire apparatus as a warning that an emergency vehicle is approaching.

In the box on this page is the question in full that is treated in this issue. In the box on the following page is the problem that will be treated in the next issue. Should you have some comment that you would like to make on the forthcoming question or if you have a problem that you would like to see treated in this department, write to "Round Table Editor," FIRE ENGINEERING, 24 W. 40th Street, New York, N. Y.

HERE IS THE PROBLEM

Do you use any special signal on your apparatus to distinguish it from commercial cars at night?

Do you believe that such special signals or markings are worth while and necessary?

Discussion of the Question

The importance of the question of a distinguishing light for fire apparatus is best indicated by the comments sent in and by the recommendation made at the National Conference on Street and Highway Safety. The replies that have been received follow:

Chas. A. McGinley, Chief, E. Orange, N. J.: In view of the fact that 33,000 lives were lost through automobile accidents in 1929 of which lack of such marking was a contributory cause, I believe that this is one of the most important questions confronting the fire chief today, and for that reason I would like to go into more detail than merely answering the questions.

Through the efforts of this department, this question was raised at the Eastern Chiefs' Convention in Baltimore, in the New Jersey Chiefs' Association, and the delegate from this department to the National Conference on Street and Highway Safety, recommended that the proposed Uniform Traffic Law be changed to read: "That all the colors except white be prohibited from being displayed from the front of any vehicle, excepting 'Authorized Emergency Vehicles.'" He further recommended that another paragraph be changed to make mandatory the standard uniform marking of the front of such emergency vehicles at night.

The reason for such laws requires much discussion, which space does not permit, but it is sufficient to say that such national uniformity will be of double value, as it will not only reduce fatal accidents from this cause, but also reduce other losses of life and property by reason of the more prompt response of emergency vehicles created by the universal use of the above regulations.

There are still other advantages to be had in such standardization. We must get and give cooperation to and from other agencies having a bearing on this question. Confliction with the colors in traffic lights, as well as fire alarm box markers and other necessary signals, require consideration. I am pleased that you have taken this question up in your columns, as there could not be a better medium of publicity to those most concerned. I hope you urge the adoption of some standard.

We use the left front headlight colored red, which is nearest approaching traffic, and retain the white in the right headlight for illumination.

I am an ardent advocate of the standardization of such signals. I believe that any signal, if made a National Standard, is better than the best, without standardization. I urge that regardless of local practices and prejudices, we all yield to whatever concensus of opinion dictates for a National Standard.

W. H. Fuller, Chief, Vicksburg, Miss.: We do not use any special lights on our apparatus to distinguish such from commercial cars at night. There should be some special light or marking on all fire apparatus.

Motorists in our city, upon seeing fire apparatus responding, fall in back of the apparatus. My men often hesitate about alighting from a truck to lay a line of hose from a hydrant, due to danger of injury or being killed.

I believe it would be a great idea for all fire trucks to display a red light or marker, as this would tend to keep motorists at a safe distance and give firemen on rear of truck a chance to do their duties. These delays are sometimes a big handicap in getting water on the fire, the acuteness of such a situation being particularly true where several properties are involved at one time.

Edward F. Dahill, Chief, New Bedford, Mass: We use a single red light with an 8-inch ruby glass lens mounted between the headlights on the Chief's and all District Chiefs' cars and also on several pieces of apparatus. The use of red lights on fire apparatus is worth while, but I would not say that they were absolutely necessary.

I believe the siren horn, a distinctive signal used only by fire and police departments, to be the best signal for fire apparatus in responding to alarms day or night. In returning from fires we use the bell.

Chas. E. Dunton, Chief, Spencer, Mass.: While we have never equipped our motor apparatus with any distinguishing lights for night driving, we have had this matter under consideration. No definite action has been taken, as we have not decided as to whether or not there would be any advantage with such equipment in a small community such as ours.

I shall await with interest the opinion of other chiefs on this most interesting subject.

S. Ferguson, Chief, Fort Worth, Tex.: All our fire apparatus is equipped with sirens. A city ordinance pro-

hibits all other vehicles, with the exception of ambulances, from using sirens. All our apparatus is painted white, which makes it easy to distinguish from other vehicles.

I most assuredly believe some method of distinction advisable and necessary.

W. F. Morgan, Chief, S. Norfolk, Va.: I do not see any need for extra markers on engines. Anyone seeing apparatus approaching with siren sounding, two head lights and a spot light, should know what is coming.

In my estimation, special markings would have little effect, as motorists nowadays won't clear the road for you, but block it instead.

J. R. Eldridge, Chief, Johnson City, N. Y.: We use a red light on the front of all fire apparatus. This is a 6-inch light with a reflector placed in the center and located about 12 inches above the driving lights. This light is turned on with the headlights.

We believe a red light at night is just as essential as the red apparatus in the day time.

E. V. Stone, Chief, Ludlow, Mass.: We use a red beam light, located between the two headlights Our experience proves that such a light has value in clearing the road at night. When the sound of the siren is heard in a closed pleasure car the driver naturally looks into his rear vision mirror and locates the fire truck with its distinctive red light. I believe such signal lights are worth while, in fact, a necessity.

E. S. Mohn, Chief, Jersey Shore, Pa.: We do not use any special signal on our trucks to distinguish them at night, the reason being that the borough that owns the fire apparatus has not been persuaded to purchase same.

Personally I think that a special marking for night work is absolutely necessary, due to the vast number of motor vehicles on all roads and streets.

J. Ralph Eddie, Chief, Webster Groves, Mo.: We have used a flashing signal that was placed above the truck body, but they did not prove satisfactory. We are now using two red bulbs in the headlights and they can be seen for quite a distance, the drivers reporting that they give ample light on the street surface.

It is my opinion that special signals are necessary for the reason that they can be seen before any one could hear a bell or siren.

Chas. H. Lynn, Chief, New Castle, Pa.: Red bumper lights are carried on the Fire Chief's car, and used only when answering an alarm.

I certainly believe that all fire apparatus should have some distinctive marking for night driving, as I find that the chief's car is given the right of way at all times by those who see the red lights on front.

John L. Lucier, Chief, Northampton, Mass.: For clearing a lane through traffic I do not think there is any signal like a powerful siren, and the bigger the better. While we are equipped with bells on our apparatus, I find that the sound does not penetrate, especially with closed cars.

I expect to equip all machines in the department with sirens in the near future, and believe this to be the proper equipment for apparatus of all departments.

Joseph Fifarek, Chief, Traverse City, Mich: We use the Buckeye Roto Ray lights on our apparatus, and find we get excellent results both day and night. For night driving, they may be seen for eight or ten blocks, and in the day time in heavy traffic they can see us coming for two or three blocks, which gives us good clear right of way.

M. J. Kennedey, Chief, West Orange, N. J.: We use one red light between two white head lights. While they are distinguishable from other motor vehicles, the plan is not as beneficial as it would be were one standard adopted by all departments.

Elmer J. Brown, Chief, Binghamton, N. Y.: I have one piece of apparatus equipped with a rotating red signal. Chiefs' cars are equipped with red cowl lights. I believe such signals are worth while and necessary.

James Schooley, Chief, Medina, N. Y.: We have two large red lights on the back end of pumpers about five and one-half feet above the running board or back step of truck. We believe that the red light signals help us a lot, for drivers of other cars keep back and do not get in our way.

Robert M. Tappin, Chief, Gardner, Mass.: We do not use any special signal other than the siren. I believe that special illuminated signals are not only worth while but quite necessary.

Thomas H. Hackett, Chief, Westboro, Mass: Our trucks are equipped with an extra searchlight which is used at night when going to a fire. It has helped in clearing the way. It does not seem to me that it is necessary to use special colored lights on our trucks in a town as small as this.

Michael H. Stapleton, Chief, Oneonta N. Y.: No special signals are used. All fire department apparatus should have special signals or some other marking that would tell the public that the car was not a commercial truck or vehicle. There would be fewer cars trying to pass.

Wm. S. McLoughlin, Chief, Bayonne, N. J.: Each apparatus of this department is equipped with red lens on ten-inch head lights. We find that special lens are worth while, as approaching cars will pull up to the curb.

W. S. Knight, Chief, Salt Lake City, Utah: Our apparatus are all equipped with sirens that are freely used at night. It is contrary to city ordinances for any commercial vehicle to use a siren.

We are sure that our sirens are very much worth while and absolutely necessary. They are our only safeguard and at that are none too good.

James M. Casey, Chief, Cambridge, Mass.: We use sirens connected to the fly wheel of the apparatus and red lights which flash. These devices are a great help when answering alarms and there is no excuse for a person not hearing the siren or seeing the red light—warnings to give the apparatus the right of way.

W. F. Woods, Chief, Portsmouth, N. H.: We use a red light on the front of our fire apparatus and we believe the plan is of great help in distinguishing fire apparatus from other cars.

William H. Hawkins, Chief, Haverhill, Mass.: We use the Whiting light and have used it on our apparatus for two years. We find that when the public notices this light on the road, the apparatus is given the right of way.

James M. Duncan, Jr., Chief, Alexandria, Va.: We use red cowl lights on all apparatus to distinguish them at night from commercial cars. Any device that will give warning to the general public concerning the approach of fire apparatus and will help to clear the traffic lanes for the department is, I believe, necessary and worth while.

R. U. Montgomery, Chief, Richmond, Ky.: I believe it is necessary to use such signals on all fire apparatus.

Frank A. Jaynes, Chief, Rochester, N. Y.: All apparatus in the city are equipped with Sterling sirens and we find them satisfactory.

Andrew Erdman, Chief, Owatonna, Minn.: We have a light mounted about two feet above the driver's head, and we also depend upon the siren.

Ebie, Weirich, Chief, Middletown, Pa.: We depend upon a hand siren and a bell to obtain the right of way.

B. A. Howard, Chief, Kirksville, Mo.: I make use of a large spot light and an electric siren at night. I am going to put red globes in my front lights.

E. E. Chase, Chief, Lynn, Mass.: We use sirens and have had fair results.

(*Continued on page* 821)

HERE IS THE PROBLEM FOR THE NEXT ISSUE

What precautions do you take to safeguard places of public assembly — theatres, lecture halls, dance halls, etc.?

What has been your experience in this work?

With the Editor

A Notable Fire Officers' Banquet

In planning the annual banquet of the Officers' Associations of the New York Fire Department, the committee chairmen adopted the wise and at the same time dignified course of permitting no public sale of tickets for that occasion. For this banquet, which takes place at the Hotel Astor on the evening of Thursday, October 2, the reservations are only available to the officers themselves, their ladies and their friends.

There is no doubt that this plan to hold the banquet without splurge and an attempt to enlist outside support will place it upon a much higher level than if it was conducted as a generally advertised affair, relying upon the support of the citizens for its financing. It proves that the three bodies—the Chief Officers', the Captains' and the Lieutenants' Associations—are prepared to stand upon their own initiative and are strong enough to conduct their affairs without running to the public for its aid in so doing.

That such action will tend to emphasize the knowledge among the citizens of the metropolis who are friends of the Fire Department—and these are legion—that the officers of the organization are a superior body of men need hardly be pointed out.

It is safe to say that those who will be privileged to be guests of the officers on the occasion of the banquet, can look forward to an evening of pleasure and profit and that the event will have an excellent effect for good upon the personnel of the department.

Ending Fire Risks in New York Schools

Recently the New York City Board of Estimate—the body responsible for appropriating funds for such purposes—set apart $500,000 for the object of removing fire risks in the public schools in the big city. It is estimated that the total amount needed in the five boroughs to completely accomplish this result will be considerably over a million and a half dollars. In Manhattan alone, it was estimated, $1,438,365 would be needed.

However, with the present appropriation a long step in advance can be taken in removing the worst features of the violations of safety regulations in the city's public schools.

The Chief Engineer of the Board of Education reported that many of the school buildings, especially in Manhattan Borough, were of an old type of architecture and had long outlived their usefulness. His investigations showed that in many cases the existing violations were in an old wing of a large building, the other wings being of modern and fire resistant construction. In instances where, through a shift in population, it was possible to use the new wings to accommodate the pupils and either shut or demolish the antiquated structures, the report recommended that this should be done. In other cases where need of room necessitates the use of the old structures, new substitutes should be erected as speedily as possible.

Other cities throughout the country are no doubt faced with similar problems. The spending of adequate sums to properly house the children and protect them from the perils of fire are one of the most necessary acts of the city governments and no hesitation should be allowed in bringing this about. The pupils of today are the backbone of the Nation and no pains should be spared to adequately protect them from such dangers.

Another "Extra Duty" for Firemen

Firemen are called upon to perform all manner of rescues from the hauling out of the old horse which drops into an excavation and the capture of an escaped canary for its frantic owner, to the more serious business of the saving of human life. One of these "extra duties" occurred recently when in a New Jersey city some sixty nurses and patients were rescued by firemen in gas masks from a hospital. This calling upon the firemen for aid was not for a fire. It was, in a way, a variant of the famous disaster in the Cleveland Clinic in 1929, in which many lives were lost through the escape of fumes from burning x-ray films. In this case, however, through the prompt work of the firemen, there were no fatalities.

Some workmen had been engaged in the work of fumigating a surgical ward with sulphuric acid fumes and had carefully closed all windows and had filled all door cracks and keyholes, but had missed a ventilator. Through this the poisonous fumes had penetrated to other wards of the hospital and but for the prompt arrival of the firemen with their masks, there would probably have been serious loss of life by suffocation. Patients and nurses were quickly carried or assisted to the fresh air, and those needing it were given first aid treatment by the firemen.

Thus the men of the Fire Department, as so often happens, were the means of saving lives and restoring the hospital to its normal functions by shutting off the valve of the fumigator in the sulphur filled room. Such work, while not really a part of their duty, is cheerfully performed for the community and its citizens by

the Chief and his men whenever it may be necessary. It is part of the day's work and so it must be done, and well done, as are all of the tasks of the fire fighters.

"73 Years Ago"

"This picture was taken seventy-three years ago, when I was twenty-seven years old," explained Thomas W. Haney, until a few years ago head of the Fire Department in Jacksonville, Fla.

An Early Picture of Tom Haney

Chief Haney was placed in charge of the Fire Department back in 1892, following the death of the late Chief Peter Jones. At that time each political faction in the city had some candidate that it favored for the position, but no one was universally accepted. At length a man was selected who pleased all the factions—he was Tom Haney, then Assistant Chief of the Atlanta Fire Department.

Fainting Spells

A fire hydrant is a harmless thing—if left alone. But in Milwaukee a seventeen-year-old boy rushed to turn in an alarm and collided with a fire hydrant on his way back to the blaze. The impact knocked him out. His mother saw the boy lying in the street and she shrieked and fainted. The father came out and fainted when he saw the condition of the others in his family. A number of firemen were required to revive the family. The blaze itself was trivial.

Complicated Device to Burn Home

A resident of Pocatello, Idaho., evidently a firm believer in the intricate inventions of Rube Goldberg, has confessed to an attempt to burn his home. The case is of interest because of the mechanical arrangements made to destroy the building. When the fire department arrived, one room was ablaze and the fire was extinguished before it communicated to the other parts of the building.

The family alarm clock was set to ring at one o'clock. As the alarm ran down it unwound a piece of cord to the end of which was fastened the bow of a pair of celluloid eye glasses. As the string unwound, the bow descended into the chimney of a lighted lamp. When the celluloid came in contact with the flame, it immediately blazed up burning in two a cord which was fastened to the wall at one end and had a bottle of gasoline on the other suspended from the ceiling over a flatiron. When the cord was burned in two, the bottle was to drop on the flat iron and break.

An arrangement similar to the one described was placed in each of the four rooms of the house and connected in series so that when one bottle of gasoline broke, a bow in another room would be let down into another lighted chimney, and the process would be repeated.

The complicated plan failed for neighbors saw the fire immediately after it had begun and sent in an alarm. Then again, all of the bottles of gasoline were not directly suspended over the flatirons and sledge hammers upon which they were intended to fall and break.

Bridgman, Mich., Orders Apparatus—Bridgman, Mich., has placed an order for Pirsch fire apparatus.

Chief Callahan Heads Iowa Association—Chief H. J. Callahan, of Ford Dodge, Iowa, was re-elected President of the Iowa State Fire Chiefs' Association, at the convention held in Burlington. He gave an instructive talk on "Fire Prevention," in which he stressed the importance of salvage work. Other officers elected were Chief J. C. Dobson, Keokuk, Vice-President, and Chief L. R. Morris, Ames, Secretary-Treasurer. The association will meet for its 1931 convention at Ames, Iowa, on May 21.

N. Y. Officers to Hold Banquet

The Chiefs, Captains and Lieutenants Associations of the New York Fire Department will hold a combination dinner on October 2d at the Hotel Astor for the dual purpose of "selling" the Fire Department to the public and also as public notice to usher in Fire Prevention Week. There are over 1,000 members of the three associations. It is to be "Officer's Night" in the N.Y.F.D., and commanding officers of fire departments in the metropolitan area are also welcome. Quite a few fire chiefs of cities and towns in the states of New York and New Jersey are former officers of the New York Department.

The chairman of the committee is Capt. Harold Burke, H. & L. Co. 30, No. 104 West 135th Street, Manhattan. The tickets are $6 each. Dancing will follow the dinner.

WM. JEROME DALY.

Plans Made for Fire Prevention Week

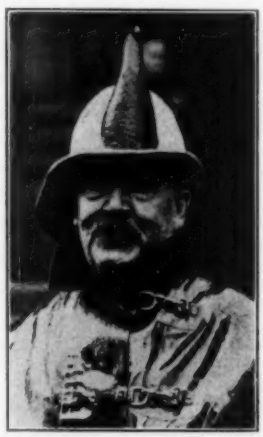
Extensive plans have been carried out by the National Fire Protection Association for the proper observance of Fire Prevention Week in October. The association has prepared a sixteen-page booklet with photographic reproductions of successful state and county fair exhibits, window displays and the arrangement of material to dramatize fire prevention.

Fire Prevention Week proclamations have been issued by the states of Illinois and Iowa, and it is expected that all the other states will issue similar proclamations at once.

Departments that would like assistance in securing speakers for Fire Prevention Week or in arranging campaign details are urged to write to T. Alfred Fleming, Chairman, Committee on Fire Prevention and Clean-Up Campaign, 85 John St., New York, N. Y.

Chief "Smoky Joe" Martin Retires

Joseph B. Martin, Assistant Chief of the New York Fire Department and popularly called "Smoky Joe," has been relieved of active duty after forty-six years of service. He had been on sick leave since a three-alarm fire on April 14. At that blaze he was overcome and many believed his end had come. The last rites of the Church were administered but Chief Martin recovered and watched the fire from a stretcher.



Chief "Smoky Joe" Martin

He returned to service on September 3, and in accordance with department rules was examined by Dr. Joseph S. Smith, Chief Medical Officer of the service. In the opinion of the medical board, the Chief would never be fit for active duty.

Assistant Chief Martin is now sixty-eight years old and has been eligible for retirement for a number of years. His present salary is $8,300 a year.

Chief Edward Croker is credited with coining the phrase "Smoky Joe" back in 1900 during a fire that had driven fifteen firemen from a burning building. The phrase has stuck.

Chief "Smoky Joe" Martin is a graduate of the College of the City of New York and he joined the Fire Department January 18, 1884. He has been mentioned on the Roll of Merit a number of times and he can recall all of the city's famous fires from the famous Windsor Hotel fire to the burning of the Equitable Building.

A son, Joseph B. Martin, Jr., is a captain in the New York Fire Department.

Urbana, Ohio, Wants New Apparatus—A resolution has been presented to the Council of Urbana, Ohio, calling for the purchase of new fire apparatus.

Ft. Dodge to Erect Fire Station—A fire station will be erected in the suburban section of Fort Dodge, Iowa. The new station will be built on land purchased last spring. The station will be manned by two platoons of three men each.

Questions and Answers

NOTE—Readers are invited to send in questions, which will be answered in the order received. Names are omitted from questions unless otherwise specified

Reaction of Nozzles Discharging Streams

To the Editor:

I would appreciate your exact explanation of the word "reaction," and of nozzle reaction; also reaction when nozzle is opened quickly on charged lines of different nozzle diameters, on 2½ inch hose. For example, E.P. = 60 lb., N.P. = 50 lb., G.P.M. = 209, friction loss in hose, assuming 100 ft. of 2½ inch hose, 10 lb. per 100 ft.

Reaction, as I figure it, would be equal to the square of the diameter of the tip and multiply by 1¼ by N.P. This is 75 lb. Just what does this figure mean? At what particular point of such line and at nozzle, and also if nozzle is opened quickly? In the latter case, what formula do you use to find reaction upon quickly opening a nozzle.

I would appreciate an explanation in detail relative to such operations on different sizes of nozzles at different pressures, assuming 100 ft. of 2½ inch hose as the line employed.

C. E. H.

Answer: Let us first consider the dictionary definition of reaction:

"Reaction is the force which a body subjected to the action of a force from another body exerts upon the latter body in the opposite direction."

Reaction is always equal and opposite to action, that is to say, the actions of two bodies upon each other are always equal and in opposite directions.

Thus if you were to strike a wall with your fist the wall would hit your fist with exactly the same force as your fist struck the wall. Or, to give another parallel illustration: if you should push against a wall, the reaction of the wall against your hand would be exactly the same as the pressure you are applying against the wall. This rule applies irrespective of whether the object being acted upon is at rest or is in motion. For instance, if you were pushing an automobile by pressing against the radiator, the pressure you exert against the radiator would be exactly equal to the reaction the automobile exerted against your efforts to push it.

Consider the case of a bullet leaving a revolver just after the cartridge has been fired. In order that the bullet can get its velocity, gas is generated by the firing of the cartridge. When the cartridge is fired, a heated gas is created in the chamber of the gun. This gas is under high pressure and wants to expand. In order to do so it exerts pressure in every direction. The bullet, being free to move, starts on its travel through the barrel. But in so doing it kicks the gun barrel back away from itself. To state it in another way, the bullet must brace itself against something in order to make its get-away. It braces itself against the expanding gas, and this gas in turn braces itself against the interior of the cartridge chamber.

And now considering the fire stream:

Water leaving a nozzle under pressure has a certain amount of energy imparted to it in the shape of mass multiplied by velocity. In getting this energy which is made up by mass and velocity, the stream might be said to brace itself against the nozzle and force the nozzle backward as the stream itself goes forward. Again stating the rule quoted at the beginning of this answer, the action and reaction are equal and in opposite directions. The stream goes forward under pressure and tends to kick the nozzle back with an exactly equal force, but in the opposite direction.

To determine just what the reaction of fire nozzles amounted to under different nozzle pressures, as well as the reaction of nozzles when suddenly opened while under pressure, tests were conducted by the Boston Fire Department under the direction of Mr. E. M. Byington, superintendent of the repair shop in 1912. These tests were intended specifically to determine the reaction or pull-back of a 2½ inch hose line equipped with a shut-off nozzle with tips of different sizes delivering streams under varying pressures.

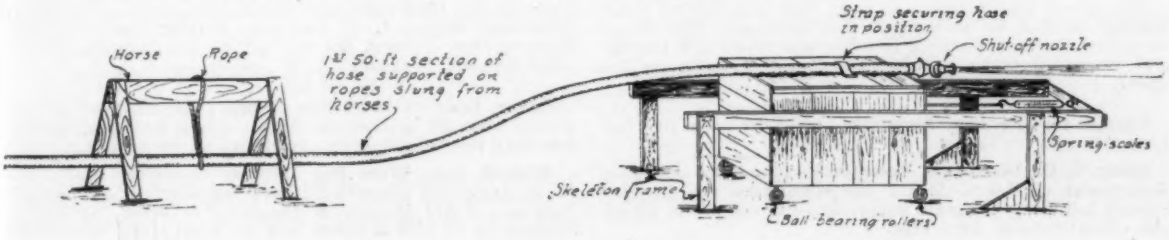
Fireboat 44 supplied the single 2½ inch hose line and pressure was controlled by a regulator valve in the line. A shut-off nozzle was securely attached to a carriage equipped with ballbearing rollers on the four sides, which was guided by a skeleton frame attached to the pier-head. A spring balance, with recording hand, attached to the frame and carriage, showed the reaction of the nozzle in pounds. The length of hose next to the nozzle was suspended by ropes attached to horses so as to give free movement to the line.

The following observations were made, the line pressure being observed on a gauge attached to a piezometer ring 50 feet back of the nozzle.

Size of Nozzle, Inches	Nozzle Pressure, Lbs. per Sq. In.	Nozzle Discharge, Gals. per Minute	Wide Open Reaction of Nozzle in Lbs.	Lines Pressure, Lbs. per Sq. In.	Reaction of Nozzle when opened quickly	Nozzle Shut-off Line Pressure, Lbs. per Sq. In.
1	48	205	68	54	98	68
1	66	240	90	75	114	88
1	93	285	138	105	164	124
1	111	311	160	125	...	143
1⅛	42	243	78	52	105	68
1⅛	61	293	114	74	142	88
1⅛	84	343	162	101	194	124
1⅛	104	380	175	...	...	143
1¼	38	285	80	50	98	68
1¼	56	345	134	73	167	88
1¼	77	405	186	100	194	124

A study of the tests made by E. M. Byington, of the Boston Fire Department, showed that the reaction of a nozzle on a 2½ inch line expressed in pounds is 1.5 d^2p, and that the reaction of a shut-off nozzle opened quickly on a 2½ inch line is 1.8 d^2p, where d = diameter of nozzle in inches and p = pressure in pounds.

Reaction is greater when the shut-off nozzle on a line of hose is suddenly opened, while under pressure. This is due to two conditions: the absence of friction loss in the hose due to the fact that there is no flow the instant the nozzle is opened; second, the elasticity of the hose creates a condition whereby the full engine pressure is applied directly at the nozzle when the nozzle is first opened. In other words, when there is no flow in the line, the full engine pressure reaches the nozzle and the hose is expanded a trifle under this pressure. Upon opening the nozzle, the elasticity of the hose forces the water out of the nozzle at a higher pressure than would be available as soon as the



flow through the line was established after opening the nozzle.

If you will refer to the above formula, you will note the reaction of a shut-off nozzle opened quickly on a 2½ inch line of hose is 1.8 d^2p, as compared to 1.5 d^2p for a line where the flow is established and where the nozzle is already opened. In other words, there is a greater reaction, as determined by actual test, in the case of a shut-off nozzle quickly opened.

Finally, there is a difference between the total pressure at the nozzle based upon the nozzle area and the pressure per unit of area, as secured by use of pitot tube, and the reaction created by the nozzle under the same pressure.

Air Pressure Chemical Tanks

To the Editor:

Will you please tell me if it is practical to use air pressure on soda and acid extinguishers? We would like to try air on 40 gallon tanks instead of acid.

W. E. S.

Answer: It is practical to use air pressure in soda and acid extinguishers, but it is likely to be far more troublesome than the use of acid for creating the pressure necessary to discharge the solution.

About twenty years ago the Kanawha Fire Engine Manufacturing Co. of West Virginia put out chemical equipment for fire apparatus which depended upon air pressure for forcing the solution out through the attached hose. The apparatus consisted of two tanks, one of them containing the chemical solution and the other containing air under pressure.

You will appreciate that where air pressure is used you must provide a gauge to make sure that the pressure is always sufficient for extinguishing operations and you must also have compressor equipment to keep the tanks charged, or for recharging them after use.

Exhibits at the I. A. F. C. Convention

Due to the great distance between the Headquarters and the Exhibit Hall, the exhibit feature of the convention was below normal. Three miles had to be covered in going from Headquarters to the exhibits, with only occasional busses running, except on Exhibit Day, when the service was excellent.

The exhibit hall, a very large armory, was only half filled with displays. Those concerns having exhibits were as follows:

American Fomon Co.
American-LaFrance & Foamite Corp.
Ahrens Fox Fire Engine Co.
Breen Motors Co. (Mack Agents)
E. & J. Sales Co.
Samuel Eastman Co.
Eureka Fire Hose Mfg. Co.
Elkhart Brass Co.
FIRE ENGINEERING
Fulton Bag & Cotton Mills
Fyr-Fyter Co.
Gamewell Co.
Gorham Fire Equipment Co.
Mack-International Motor Truck Corp.
Mine Safety Appliance Co.
P-B Manufacturing Co.
Pyrene Manufacturing Co.
Henry Pinsel
Petch Clothing Co.
Phister Manufacturing Co.
Waterous Company
Voleske Tool Co.
J. A. Charette
Bureau of Labor Fire Prevention Branch, Manitoba

Oil Depot Explodes in Greece

Eight persons are dead, twenty others injured, and property valued at $2,000,000 was destroyed when an explosion wrecked the depot of the Standard Oil Company in Drapetzona Bay near Piraeus, Greece. Eighteen oil barges were wrecked.

The fire is believed to have started from leakage of gasoline into the harbor from an English cargo boat. A workman cooking his supper over a shore fire, tossed a burning brand into the water and it immediately involved eight ships loaded with oil. In a few minutes one ship exploded and its crew of three instantly killed.

The Greek fleet nearby and tugs that were rushed from Piraeus worked to prevent further damage. The Greek passenger steamer Marietta Komiku was saved and the fire was prevented from reaching Standard Oil tanks on the quay.

Canton, Ga., Receives Apparatus—New fire apparatus has been delivered to Canton, Ga.

Aiken, S. C., Discharges Volunteers—The entire volunteer department of Aiken, S. C., was discharged by the city council following a dispute concerning the manner in which the official records were kept.

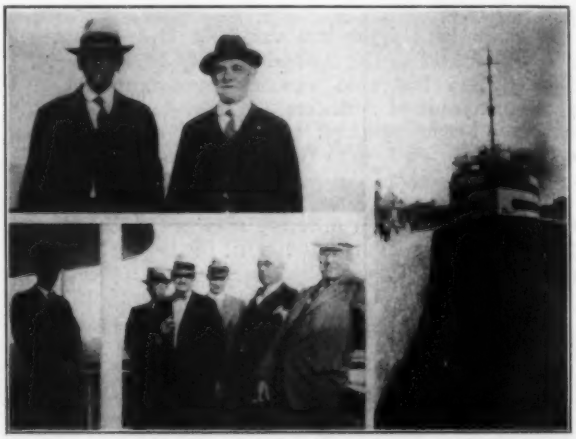
NEW ENGLAND CHIEFS ENJOY TWO DAYS' SAIL ON LAKE

Eastern States Party Takes Three Enjoyable Days to Reach Winnipeg Convention—Those on the Trip

FOLLOWING a three-day trop of which two invigorating days were spent on the Lake Steamer Naronic, the party of the New England Fire Chiefs' Association arrived safely in Winnipeg to attend the I. A. F. C. Convention. It is said that the trip on the lake will always be remembered because of the singing services conducted by Chief Charles McCarthy and the quartette from Chicopee.

Chief Selden Allen of Brookline, Mass., bore the brunt of many laughs when he asked the majestic individual parked outside of a Canadian hotel, "What time are we on now?"

"Summer time," was the answer, and the true one, for what is termed daylight saving time in the states is called summer time in Toronto.



Snapshots Taken of the New England Group

Upper left: Chief Wm. Green, Concord, N. H. (78 years of age, Chief 36 years, and is considered one of the oldest active chiefs in New England); Chief James Smith, Nashua, N. H. Lower left: Left to right: Chief Arthur E. Soper, Mansfield, Mass.; Chief H. B. Whiting, Hampden Beach, N. H.; Chief Hawkins, Haverhill, Mass.; Supt. Walden, Worcester, Mass.; Chief Chas. McCarthy, Worcester, Mass.; L. Moulton, Ahrens-Fox. Right: The New England Chiefs crossed the Great Lakes on their way to the convention. They are shown on the bow of the "Noronic' above.

For the benefit of Chiefs Montmeny, De Courcey and Dan Tierney, Joe Graham acted as conductor and guide for the boys along the bridal trail at Niagara Falls. It terminated a trip to what is considered the most instructive convention ever attended.

The following New England Chiefs made up the special party: D. B. Tierney, Arlington, Mass.; S. R. Allen, Brookline, Mass.; Mr. and Mrs. F. B. Dickinson, Brockton, Mass.; H. J. Hyatt, Fitchburg, Mass.; R. M. Tappan, Gardiner, Mass.; Earl Moulton, Worcester, Mass.; C. L. McCarthy, Worcester, Mass.; L. C. Walden, Worcester, Mass.; P. J. Hurley, Holyoke, Mass.; Justin McCarthy, Boston, Mass.; J. M. Smith, Nashua, N. H.; A. M. Montmeny, Chicopee, Mass.; T. J. Mahoney, Westfield, Mass.

A. J. Cote, Woonsocket, R. I.; Mr. and Mrs. J. E. Sullivan, Lowell, Mass.; Mr. and Mrs. J. Doherty, Lowell, Mass.; David De Courcey, Winchester, Mass.; J. J. Scully, Boston; H. Tracy, Boston; H. B. Whiting, Hampton, N. H.; H. H. Hawkins, Haverhill, Mass.; L. F. Purt, Central Falls, R. I.; T. F. Almond, Central Falls, R. I.; John H. Savage, Valley Falls, R. I.; John Ashmead, Hartford, Conn.; A. E. Soper, Mansfield, Mass.; J. T. Gorham, Boston; Harry Lowell, Boston; Dave Fenner, Boston; Bill Green, Concord, Mass.; Fred Sargent, Senuapee, N. H.

Akron, Ohio, to Erect Fire House—The construction cost of the new fire station for Akron, Ohio, was considerably less than the $50,000 figure established by the architect.

Elwood, Ind., Want Pay Increase—Members of the Elwood, Ind., Fire Department have petitioned for an increase in pay. A $15 increase is requested to bring the pay of firemen up to $125 a month and the chief's pay up to $135.

FEDERAL TRADE COMMISSION RECORDS DESTROYED BY FIRE

Twenty Hurt Fighting Washington, D. C., Blaze in Temporary War Period Building —All Fire Apparatus in District Called

EVERY piece of available fire apparatus in Washington, D. C., and in suburbs as far distant as Anacostia, Md., were called to fight a fire that stated in a temporary building constructed during the last war period and now used to house the records of the Federal Trade Commission. The lack of loss of lives, it is said, is due to the fire starting shortly after the seven hundred employees working in the building had left for their weekly half-day holiday.

The building destroyed was two stories high and covered an area of three by five hundred feet. It was constructed of plaster board and stucco.

It is believed that the fire was started by a broken electrical connection. A strong wind was blowing at the time.

All Available Apparatus Responded for This Fire

The fire was so intense that water evaporated into steam as soon as it struck the fire.

The blaze was discovered by a messenger in the government employ. An alarm was sent at once. A military detachment was sent from Fort Myer, Va. The soldiers were used to bring out such files and pieces of office equipment as could be saved. Firemen worked steadily in an attempt to hold back the flames until they were overcome by the smoke or forced to retreat due to the heat.

While no estimate was made of the property damage, valuable records relating to investigations of public utilities, chain stores, and retail stores, and many reels of historical motion pictures were destroyed.

Very interesting comments were made in the editorial columns of the *New York Times* concerning the fire:

"The fire which destroyed the offices of the Federal Trade Commission in Washington is the third to embarrass government officials in recent months. The other two were in the Executive Offices and the dome of the Capitol. At first it was feared that most of the commission's records were burned up, but the latest reports indicate that many of them can be reclaimed.

"A familiar moral is pointed by this incident. It is short-sighted, foolhardy even, to store valuable public records in flimsy buildings. The papers themselves are inflammable enough, without trebling the risk of conflagration by surrounding them with lath and plaster board. During the war period tinderbox offices sprouted about Washington like mushrooms in a field. It is high time they were replaced by permanent, fireproof structures, for the sake of both documentary and human contents."

WHAT'S BURNING

THE following list includes fires of $25,000 loss and over in the United States and Canada, for the periods designated in the headings. These figures, compiled from telegraphic reports, are based on estimates made at the time, and are subject to later investigation and consequent revision. Taken as a whole, however, they give an approximately correct view of the losses incurred. The figures represent loss in thousands of dollars.

Week Ending September 15	Loss in Thousands of Dollars
KANSAS CITY, MO.—Hanger of Bredouw-Hilliard Corp.	65
ALTAVISTA, VA.—Storage bldg. of Lane Co. destroyed	200
MANOR, TEX.—Business property destroyed	80
REGINA, SASK.—Whse. of Boden & Innes destroyed	35
PORTLAND, ORE.—Property of Portland Union Stock Yds.	25
HERRIN, ILL.—Tipple at Consolidated Mine No. 7	80
BILOXI, MISS.—Faucon residence destroyed	25
SARANAC LAKE, N. Y.—Branch of Callahan's Lumber Mill	200
CHICAGO, ILL.—Whses. of Goodrich Lines, adj. property	1,500
LUBBOCK, TEX.—J. C. Penny Dept. store damaged	50
RISING SUN, MD.—E. T. Reynolds Dept. store destroyed	25
HOOSICK FALLS, N. Y.—Farm property of H. Ehrnier	25
COOLEYVILLE, MASS.—Property of John Waskiewitz	25
BUFFALO, N. Y.—Bldgs. of Queen City Foundry Co.	150
ROCHESTER, N. Y.—Four warehouses downtown section	40
MINNEAPOLIS, MINN.—Mill of W. T. Devereaus Grain Co.	100
CLOQUET, WIS.—Northwest Paper Co's mill B	125
LEPANTO, ARK.—Property of Heilman Brothers	25
ELKTON, S. DAK.—Five business buildings destroyed	30
GRAND RAPIDS, MICH.—Granary House of Blythefield Farms	25
CHICAGO, ILL.—Factory No. 2 of Curtis Candy Co.	600
RIVERTON, MAN.—Mill of Riverton Lumber Mfg. Co.	65
THE PAS, MAN.—Property of Calvin Clin Flon mines	35
DELPHI, IND.—Boyd Martin boat factory destroyed	25
FOND DU LAC, WIS.—Two business buildings destroyed	40
PT. MARION, PA.—Business and residential property	60
CICERO, ILL.—Cars of Chicago Rapid Transit Lines	300
WATERLOO, ONT.—Baruch Seagram stables destroyed	500
RALEIGH, N. C.—Lumber mill of C. J. Lassiter Co.	25
MITCHELL FIELD, N. Y.—Enlisted Men's Club and commissary	80
SALT LAKE CITY, UTAH—Yards of McFarland Lumber & Hardware Co.	25
ISHPEMING, MICH.—High school bldg. destroyed	90
STAPLETON, S. I. N. Y.—Rubsam & Horrmann Brewery	700
Week Ending September 12	
ARTESIAN, S. DAK.—Six business bldgs. destroyed	25
BOSTON, MASS.—Property of Shubert Theatre Co.	40
CAPE MAY, N. J.—Yacht of J. H. Van Sciver of Phila., Pa.	125
DENISON, TEX.—Property of Barnhart Mercantile Co.	150
OAK CLIFF, TEX.—Plant of Lingo Lumber Co., adj. property	200
SHARON, CONN.—Hospital Barn of Sheffield Farms	35
SHERIDAN, WYO.—Ranch property of J. S. Davis destroyed	35
LINDEN, TENN.—Plant of Tennessee Elec. Power Co.	25
OCEAN CITY, N. J.—Park Theatre, adj. business bldgs.	100
RAWLINS, WYO.—Property of Seminole Mt. Gold Mine	65
WORCESTER, MASS.—Plant of Wickwire-Spencer Steel Co.	40
MT. VERNON, N. H.—Grand Hotel destroyed	80
THOMSON, GA.—Knox bldg., housing business concerns	30
LOCKPORT, N. Y.—Property owned by Frank Grillo	25
INDEX, WASH.—Hotel apt. house and garage destroyed	80
OBERON, N. DAK.—Elevator of Farmers' Grain Elevator Co.	80
PATERSON, N. J.—Lamond & Robertson Co., carpet mill	400
FULTON, MO.—Callaway Hardware Co., adj. property	80
SOLON, ME.—Property of Lawrence Canning Co.	65
BLAWNOX, PA.—National Amusement Park Concessions	25
JAMESTOWN, N. DAK.—Dormitory at Jamestown College	40
WEST HELENA, ARK.—Residential property in Negro section	25
STAMFORD, CONN.—Bldg. occupied by White Mfg. Co.	25
TROY, ALA.—Bldg. occupied by Mary-Hall Motor Co.	80
SAN JOSE, CAL.—Shaw fruit packing plant destroyed	25
SOMERSWORTH, N. H.—Mill of Dwight Mfg. Co.	65
SALEMVILLE, PA.—Tipple of Keystone Coal & Coke Co.	275
PITTSBURGH, PA.—Property of Duquesne Baking Co.	180
JEFFERSONVILLE, IND.—Steamer America destroyed	125
BLUE POINT, L. I., N. Y.—South Bay Hotel, Wm. Wood, Prop.	60
RUMSON, N. J.—Home of J. F. Johnson destroyed	80
ST. PAUL, MINN.—Business property, 904 Rice St.	60
FULTON, KY.—South Annex of Usona Hotel destroyed	80
BELLEVILLE, ILL.—Plant of Oakland Foundry Co.	400

Newton, Iowa, Buys Pumper—A 500-gallon Seagrave pumper has been purchased by Newton, Iowa.

Berea, Ohio, Raising Funds—Funds are being raised in Berea, Ohio, for the purchase of fire apparatus.

Saugus, Mass., Buys Ladder Truck—Saugus, Mass., voted to buy a ladder truck from the McCann Company, Portland, Me.

Lynn, Mass., to Have Rescue Squad—A rescue squad will be established in Lynn, Mass. The apparatus will be equipped with plaster hooks, axes, a life net, light extension folding and scaling ladders, inhalator and first aid equipment.

Chiefs Launch Educational Program

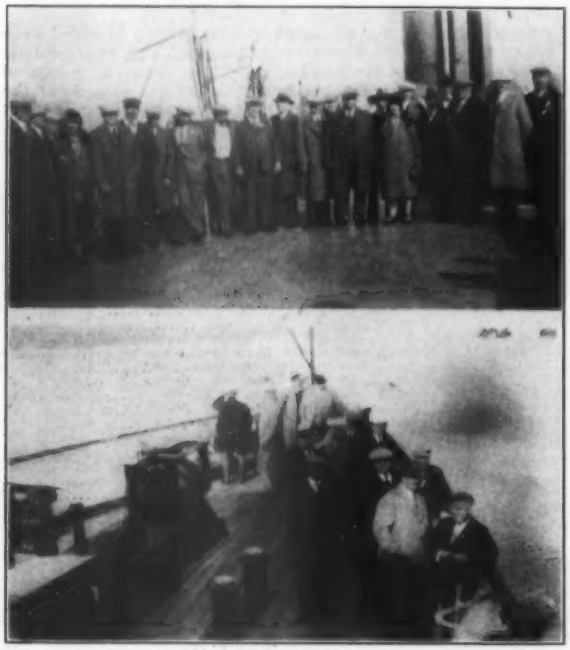
(*Continued from page* 808)

make-up of the successful instructor," said Dr. Moore. "These are: (a) Preparation of self; (b) preparation of pupil; (c) preparation of subject."

In addition, Dr. Moore emphasized the necessity for an instructor to believe in his work; that he must be a master of his subject so that students will look up to him.

"It is necessary," he continued, "that there be created in the pupil a desire for the subject. System, order and discipline are all necessities. And the subject must be so presented that even the dullest pupil will understand."

There is always danger of shooting over the heads of the students, he pointed out, and to avoid such tendency it is necessary to work down to the lowest and not up to the highest. Never-ending patience is fundamental; dressing up the subject is required in order to keep attention, he concluded.



Upper: Aboard, and En Route to Winnipeg

Some 150 delegates and friends boarded the S.S. Assiniboia at Port McNicoll for the cruise across the Great Lakes. Here are a few of them on the upper deck.

Lower: On Lake Superior

Some members of Abe Brown's New York party in the bow of the S.S. Assiniboia somewhere on Lake Superior.

Upper left: Left: C. B. Rose, President, American La-France & Foamite Corporation, and (right) J. H. Green, President, Eureka Fire Hose Manufacturing Co. Upper right: A. G. Sullivan, Manager Motor Apparatus, American La-France & Foamite Industries, Inc. Lower: L. to R.: E. C. Rumsey, Master Mechanic, Detroit Fire Department; O. E. Fearn, Master Mechanic, Washington, D. C., Fire Department; Chief S. J. DeMay, Detroit; R. G. Browning, Mack Trucks, New York.

Administration

Assistant Chief Samuel Dodd was called upon to present the third topic of the Educational Program. He outlined very fully, with the aid of lantern slides, the fundamental requirements of a model officer. With the aid of the slides, projected on a large screen at the front of the Convention Hall, he showed very vividly the necessity of officers conducting themselves in a manner which will give the public a proper impression of the Department.

"The officer must not be a 'good fellow,' or a 'weak sister' if he is to maintain proper discipline. He must not join the men in their recreation, for it breaks down discipline; furthermore, the men do not wish his participation in their games," said Chief Dodd.

He outlined the function of officer and men in drill work, in inspection work, record keeping, and other departmental activities. This talk, as with the preceding topics, was warmly received by the convention.

Care of Hose

Chief Dodd was again called to the platform, this time to discuss the care of fire hose. The keynote of his talk was well given in his introduction of the subject when he said: "If the hose is not right we are going to lose many a building."

He cited many examples of fire hose being injured around the station and in service due to carelessness or ignorance on the part of the men. The thoughtless placement of an acid container, the careless recharging of chemical tanks on apparatus, careless refilling of gasoline tanks, and the dragging of hose through oils and greases were pointed out as specific causes of injury to hose. The crossing of hose lines by apparatus was mentioned as another common source of injury to the hose. "The placement of hose lines alongside curbs and crossing the street at the first building will eliminate a lot of unnecessary damage to hose by heavy apparatus," said Chief Dodd. Lantern slides were used to illustrate the various points brought out in the talk by Chief Dodd.

He concluded by outlining the value of systematic hose records for keeping tab on the performance of hose, as well as keeping the department informed as to when the hose should be discarded.

Hydraulics

The final topic of the afternoon program was devoted to a discussion of hydraulic head and pressure by Captain J. L. Gowell, instructor of the Los Angeles Fire College. Captain Gowell very ably outlined the development of some of the fundamental figures employed in hydraulic calculations, such as static head, weights and volumes of water. He referred to many incidents during his connection with the fire service which emphasized the great value of a knowledge of hydraulics on the part of members of fire departments, and particularly among the officers.

Wednesday Session

The delegates were taken to a local theatre Wednesday morning to witness the projection of the Association's new

Some Well Known Members at the I. A. F. C. Convention

Left Picture: Chief J. F. Healy, Denver, Col.; Jay Stevens, Executive Secretary, I. A. F. C.; Theodore Kostitch, Denver, Col. Left Center Picture: Chief C. W. Ringer, Minneapolis, Minn.; Capt. J. J. Conway, Supt. of Fire Patrols, Cincinnati, Ohio. Right Center Picture: Chief M. M. Tawney, Harrisburg, Pa.; Chief James Armstrong, Kingston, Ont. Right Picture: John Ashmead, Fire Insurance Engineer, Hartford, Conn.; A. W. Meier, Master Mechanic F. D., St. Louis; Chief J. J. Brennan, Pelham Manor, N. Y.

talkie film on salvage work. The chief actor in the picture is Chief Frank C. McAuliffe of the salvage patrols of Chicago. All branches of salvage work were shown and the different points explained by Chief McAuliffe. It was generally agreed by the enthusiastic audience who witnessed the picture that it will go a long way toward educating fire departments both in the value and essentials of salvage operations. Prints of the film will be available for distribution, it is hoped, within the next couple of months.

Following the showing of the film the delegates returned to convention headquarters at the Royal Alexandra Hotel for the first topic on the morning's program which was delivered by Mr. LaMott of the Dupont Powder Company. Mr. LaMott discussed the subject of demolition of buildings at conflagrations. He pointed out that the present knowledge of the use of dynamite for destroying structures in the path of a spreading fire was largely secured by experiences at the Chicago and Atlanta conflagrations. He said that the use of dynamite for demolition work was not recommended in the case of brick or stone buildings because they offered a greater resistance to the progress of fire when erect than when flattened out after dynamiting. But where frame buildings were involved and little or no water available, together with a high wind blowing, the use of dynamite is considered effective and practical. The chief fault in the use of explosives in demolition work, the speaker said, could usually be traced to employing too small charges. For example, for an eight room frame building two to three hundred pounds of 60 per cent dynamite is necessary in a charge to completely level the structure. It is better to demolish rows of buildings at one time rather than individual structures. The cap and fuse method was preferred by the speaker over other methods of detonating charges.

He recommended that no great excess of dynamite be kept on hand, in order that the hazard incidental thereto be kept to a minimum.

The use of dynamite for ditching in connection with brush fires was also mentioned. Ditching by dynamite accomplishes two things: provides a fire stop and also a supply of loose earth for application in extinguishing grass or brush fires.

In answer to a question regarding the action which should be taken in the case of a dynamite magazine becoming involved by fire, the speaker recommended that the fire force proceed at once to a point of safety.

Electrical Hazards

Captain Gowell was called upon to deliver the next talk, which was devoted to fire and life hazards incidental to the use of electricity. He outlined very ably the growth in use of current and the fire hazards which were created thereby. For example, the introduction of new appliances from time to time, which use large quantities of electricity has resulted in overloading circuit originally installed for lighting purposes only. To illustrate this point Captain Gowell performed an experiment which brought out very clearly the heating produced on a circuit through overloading. A No. 18 wire was fused by overloading after the insulation had been burnt off through heating of the wire.

He described what he termed "back-alley" hazards. These hazards are frequently caused by improper wiring and high tension lines coming in contact with low voltage circuits. Hazardous conditions occasionally result from storms during which high and low tension wires may cross, through the former being blown down, said the speaker.

Exposures

One of the most interesting and instructive talks given in connection with the Association's educational program was that by Assistant Chief Dodd of the Los Angeles Fire college on "exposures." Starting with the statement that 75 per cent of all fires start in the lower parts of buildings and that 80 per cent of these fires extend upward within the building, Chief Dodd outlined very thoroughly the many ways in which fire may spread within a building or to adjoining or neighboring buildings.

In basements, for example, fires may spread two ways—horizontally and vertically. Horizontal spread may be through unprotected openings in party walls, while vertical spread may take place through any number of channels extending up through the building.

He pointed out the hazard incidental to fires spreading across streets or from building to building through power and light tunnels.

With reference to covering a building to prevent exposure to adjoining or neighboring structures, the speaker emphasized the necessity for remembering that there are four sides to a building. Closing of fire doors by members of the department was stressed as a means of preventing extension. Proper consideration of hazards incidental to embers, bridges from building to building, and scant parapets were also emphasized. Use of all equipment available to prevent extension of fire, including the auxiliary equipment of adjoining buildings, was also recommended. Chief Dodd's paper was fully illustrated, as were practically all papers presented by members of the educational committee, with instructive lantern slides.

Arson

Of the many papers on arson given before conventions of the Association, that presented at Winnipeg by E. M. Blanford, Chief Special Agent of the Pacific Coast Arson Bureau, National Board of Fire Underwriters, was one of the most comprehensive and practical. Included in this paper was a great amount of information of value to fire department heads who are interested in reducing arson losses. This paper will be published in full in an early issue of this journal.

Afternoon Session

The afternoon session started with a paper by George W. Booth, Chief Engineer of the National Board of Fire Underwriters. Fires in hospitals and similar institutions occur at

From Panama to Massachusetts Shows How Widespread Was the Representation of the I. A. F. C.

First Picture: Assisting the Injured: Chief C. A. McGinley, East Orange, N. J. (left) and Chief J. McMillan, Orange, N. J. (right) help Chief Wm. Ziegler, Hackensack, N. J., to pose for a picture. Bill injured his foot en route. Second Picture: Chief Henry A. Fox, Boston, (left) and Chief Frank Charlesworth, Providence, (right). Third Picture: The De Castro family was on hand. Captain Maurice F. de Castro of the Panaca City Fire Department, his wife (left), and sister and niece enjoy the conention trip. Fourth Picture: Chief F. C. Jesser, Covington, Va.; Chief J. M. Duncan, Jr., Alexandria, Va., and R. M. Green, Jr., Alexandria, Va.

These Empire State and New Jersey Members Thoroughly Enjoyed Themselves

Left Picture: Chief H. Campbell, Irvington, N. J.; G. L. Mitchell, Ex-chief, East Orange, N. J.; J. Keegan, Supt. Salvage Corps, Newark, N. J.; Chief A. Chamberlain, Hillside, N. J. Center Picture: Chief C. Huber, Endicott, N. Y.; Ex-Chief A. H. Lyon, Binghamton, N. Y.; Chief J. H. Espey, Elmira, N. Y.; Chief G. M. Bowen, Rome, N. Y.; Chief C. W. Noll, Poughkeepsie, N. Y. Right Picture: Chief L. C. Brookings, Norwich, N. Y.; Chief A. G. Derra, Schenectady, N. Y.; Chief G. Bogardus, Norwalk, Conn.; Chief K. V. Ridley, Teaneck, N. J.

the rate of more than one a day with an annual loss exceeding $1,000,000, according to Mr. Booth. Failure to consider fire safeguards during building construction predominates as a primary or contributing cause of fires in hospitals, Mr. Booth said. In existing hospitals, not of fire-proof construction, the first effort should be to isolate a fire, preferably to a single portion of any story, or at least to the story itself. This could be accomplished, the speaker said, by enclosing stair or elevator shafts and other vertical openings by enclosures constructed of materials of fire resistance sufficient to afford at least one hour's protection against fire. Mr. Booth also discussed X-ray laboratory precautions, protection of operating room, static electricity dangers, hazards from oily rags, and sprinkler systems in hospitals. This paper also will be published in full in a later issue.

Hydraulics Again

Captain Gowell again took the platform to talk on hydraulics, this time devoting his attention to the subject of "suction." He pointed out that there is no such thing as lifting water by suction, for no contact exists between the agency producing the work and the water being lifted. Elevating water by "suction" is done through creating a partial vacuum above the surface of the water, and letting atmospheric pressure from without force the water up to such a point that the sums of difference in the static heads within and without the pipe plus the air pressure on each surface are perfectly balanced. By use of a mercury and water column set, the speaker very ably illustrated the raising of water by suction as well as explaining the limitations in lifting water by this means. Figures were presented to show how calculations might be performed in changing static head to pressure.

Ventilation Illustrated

In his first talk of the afternoon session, Chief Dodd ably handled the subject of ventilation of buildings during fires. Starting with a description of the methods employed in the Los Angeles Fire college for teaching the principles of ventilation by use of a miniature smoke house, Chief Dodd carried the subject right through to the practical applications of the principles involved. In certain types of structures he recommends sending men in pairs to the roofs of ventilate, carrying with them a roof rope for escaping in case of emergency. He also described the use of the ball and chain as well as pompier ladders for breaking windows on floors below when operating on roofs. Details were included in the talk on specific methods and equipment employed in ventilating operations. The large number of lantern slides displayed showing both conditions in actual fires as well as in drills enabled the delegates to secure a very clear conception of the methods and benefits of ventilation.

Discharge Formulas

Captain Gowell, as his second talk in the afternoon program, discussed discharge formulas and data, giving illustrations of the methods of calculating discharge from nozzles under different pressures. He explained very ably the derivation of the discharge formula and illustrated its application. This formula is:

$$\text{Discharge} = 30d^2\sqrt{p}$$

where "d" is the nozzle diameted in inches and "p," the pressure in pounds per square inch. This formula gives gallons discharged per minute. The speaker pointed out that the formula does not give exact results, but the variance is so small that it may be neglected.

Oil Fires

One of the most illuminating discussions on oil fires ever presented before the Association was delivered by Chief Dodd in his second appearance on the platform of the after noon session. Speaking with the aid of lantern slides, which illustrated the many points of importance in connection with handling oil fires, Chief Dodd covered the subject from equipment employed up to and through the methods of extinguishing oil fires of great magnitude. The speaker outlined oil fire hazards as encountered in Los Angeles and neighboring cities, particularly those hazards which resulted from the building up of and annexing territory adjacent to the city. Emergency methods of combating oil fires; detection of "boil-overs" and other phenomena in connection with oil tank fires, and use of special equipment were all included.

Concluding Chief Dodd's talk was a motion picture film showing several large oil fires together with the fire forces in operation.

Evening Session

The evening session opened with another talk by Captain Gowell who spoke this time on friction loss in fire hose. Wherever there is motion there is friction, said the speaker. As to whether or not there is motion in the film of water adjacent to the lining of the hose, Captain Gowell was noncommital, but the motion of the water itself, whether the entire cross section or just the core of the stream, produces a loss of pressure. This pressure loss, he pointed out, was a big factor in determining the pressures at the engine and nozzle. The use of the friction loss formula was fully described and several illustrations given of its application. The formula is:

$$F\ (100'\ 2\tfrac{1}{2}^{h}\ \text{hose}) = 2 \times Q \times Q + Q$$

where "F" is the friction loss per hundred feet of 2½ inch hose, and "Q," the number of hundreds of gallons flowing in the hose per minute.

Round Table Discussion

The Round able discussion brought forth much interesting information. Chief Healy of Denver, Col., opened it with a question on the wisdom of equipping wards and rooms in hospitals with automatic sprinklers. Practically all of those delegates discussing the subject favored sprinkler equipment in hospital buildings, though many were of the opinion that sprinkler heads should not be placed in the rooms to be occupied by patients.

In a discussion on the causes of forest and brush fires it was urged by one delegate that all automobiles should be equipped with receptacles for burnt matches, cigarette and cigar butts, for it was held that a number of disastrous forest fires originated from this cause.

With regard to films in hospitals it seemed to be the concensus of opinion that such films should be stored in buildings detached from the hospital building proper. Other topics discussed in the round table were: model arson law, apprehending incendiaries and rate of rise sprinkler equipment.

A Stag Party

Following the evening session the delegates who were unaccompanied by wives (and apparently no wives were

New Jersey and Pennsylvania Are Well Represented in These Groups

Left Picture: D. S. Mesereau, Chief F. Schier, Capt. J. J. Giday, Jersey City ,N. J., Chief Roger Boyle, Jersey City, N. J. Right Picture: Four chiefs from the Oranges in New Jersey, Chief C. A. McGinley, East Orange, N. J.; Chief J. McMillan, Orange, N. J.; Chief H. J. Becker, South Orange, N. J.; Chief M. T. Kennedy, West Orange, N. J. Right Picture: Chief M. E. Clark, Williamsport, Pa.; F. R. Grady, Jersey City, N. J.; Chief J. Gibbs, Montclair, N. J.; Chief G. E. Koeber, Bloomfield, N. J.

present) were treated to a stag party staged under the direction of Chief Boulden. It is needless to say that the party was a merry one, and that neither water nor sarsaparilla were in evidence.

Hydraulic Formulas

Captain Gowell opened the morning program with a talk on underwriters formulas, mentioning those used for calculating engine and nozzle pressures. The formula employed for finding nozzle pressure follows:

$$N.\ P. = E.\ P. \div (1.1 + KL)$$

where N.P. is nozzle pressure, E.P. is engine pressure, K a factor depending upon hose and nozzle diameters, and L, the number of 50 foot lengths in line.

The formula for engine pressure is:

$$E.P. = N.P.\ X\ (1.1 + K.L.)$$

where the symbols are the same as those in the preceding formula. Captain Gowell applied these formulas to several examples in order that the delegates might see just how the solutions were developed.

Teaching Watchmen

Chief Dodd, with the aid of numerous lantern slides, illustrated the methods employed by the Los Angeles Fire college in teaching watchmen the essentials of their work. Prefacing his talk with a discussion of a number of incidents wherein fire loss had ocurred as a result of inexperience on the part of the watchman, Chief Dodd traced through from the start to finish the career of the average watchman in his calling. He called attention to the necessity for instructing these men in the use of first aid equipment as well as signalling apparatus, and stressed the value of training them to detect hazardous conditions and report the same to plant officials. The Los Angeles college has instructed several classes of watchmen in their work and upon the satisfactory completion of the course presented to each student a certificate of graduation. Such certificates, the speaker said, prove of great value to watchmen when applying for new positions.

Quick Calculations at Fires

Hydraulic calculations are usually considered as requiring pencil and paper. But Captain Gowell in his second talk on Thursday morning showed how quick and approximate calculations could be made of hydraulic problems on fire grounds without the aid of pencil and paper. In making these calculations certain average values for discharge, nozzle pressure, and static pressure per story are assumed. On the basis of these assumptions it is possible in a few seconds for a fire officer trained in the subject to quickly determine desired pressures for different layouts. For static, or back pressures, five pounds per story is assumed.

Engine Hook-Ups

The final topic of Thursday's program was on engine hook-ups by Captain Tebbetts. He showed the delegates something new in the way of relay lines when he displayed on the screen a relay lay-out 6500 feet in length, using several engines and delivering 14 streams tapped off this line. Each branch line was 300 feet long, 1½-inch hose, having ½-inch tap. The discharge from each nozzle was in the neighborhood of 44 gallons per minute. This relay line was stretched up an incline to an elevation of over 500 feet.

He pointed out the importance of officers and men knowing their hydrant construction and operation thoroughly. In the Los Angeles department, apparatus has been developed for testing suction hose by use of a vacuum pump and many defective suctions have been detected through testing. The test equipment consists of a cap for the suction hose fitted with a vacuum gauge and a peep-hole. To the other end of the suction is fitted a cap to which is attached the vacuum pump. Just inside this cap, in the suction line, is an electric light which is lighted during the test. When caps have been tightly fitted the vacuum pump is started, and if the hose is defective the lining can be seen through the peep-hole projecting inward and blocking the water way.

The speaker also described the use of the four-way valve appliance widely used for connecting an engine to a hydrant line without shutting off the water. The use of parallel lines of 2½-inch hose as suction lines in the event of a hydrant being otherwise inaccessible was described.

One innovation in placing engines at suction was discussed by Captain Tebbetts. This evolution is performed at waterfront properties where there is plenty of room for manipulating the pumper. It consists of laying out the suction lines, and connecting them up (whether 2, 3, or 4 sections) to the engine. The suction lines are laid along the dock or street. After properly connecting up, the suction line is carried by men while the engine backs up, the suction line being eased over into the water as the engine proceeds backwards.

Some other innovations described by the speaker included the use of gutters for permitting water to flow from remote hydrants down to a point where the gutter could be dammed and the water picked up by the suction of a pumper; use of the pumper for supplying air to men trapped in man holes.

A very striking demonstration was made of this latter practice when a 300-foot line of 1½-inch hose was stretched into the convention hall from a rotary pump out in the street, and a good stream of air delivered from the open butt of the hose in the convention hall. It is estimated that 20 cubic feet per minute at engine pressure of 6 pounds was furnished by the pumper.

Other Business

Chief Ross B. Davis of Philadelphia demonstrated a device which has recently been placed on the market for preventing the ignition of film in the canisters or magazines of a motion picture machine when the film passed through the projecting apparatus takes fire.

District Reports

In the reports of the district associations, the Dominion Association reported an increase of forty new members during the past year. The Missouri Valley Division reported 73 paid up members at the present time as compared to 30 paid up members last year. The Association plans convening at Kansas City next spring at the time the State of Missouri holds the fire short course in that city. The Southwestern Division reported a slight decrease in membership but a campaign is planned for next year which is expected to double the membership. Next year's meeting will be held at Dallas, Texas; and it is believed that this location of meeting will bring in many new members from the southwestern part of the district.

(*Proceedings continued on page* 823. *For list of attendance see page* 820.)

Those Who Attended the Chiefs' Convention at Winnipeg, Canada

ACTIVE MEMBERS

(Chiefs unless otherwise specified)

Allen, Selden, R., Brooklyn, Mass.
Almgren, Louis, San Diego, Cal.
Alt, Charles, St. Louis, Mo.
Atcheson, Hamilton, Ont.
Aura, C. A., Commissioner, Hibbing, Minn.
Anderson, Wm. R., Fort Myers, Fl.
Almond, Thos., Central Falls, R. I.
Armstrong, James, Kingston, Ont.

Baines, George W., Moose Jaw, Sask.
Baird, Thomas, Chief Inspector, Winnipeg, Man.
Beatty, C. J., Jamestown, N. Y.
Bowker, R. H., Passaic, N. J.
Blake, Thomas, Rockford, Ill.
Bell, Dr. J. H., Commissioner, Hamilton, Ont.
Buel, W. A., Parsons, Kans.
Black, James, Grand Forks, N. D.
Beaman, James, Great Lakes, Ill.
Boaz, S. C., Henryetta, Okla.
Booth, George W., Chief Engineer, New York, N. Y.
Brosnan, D. W., Albany, Ga.
Blanford, Murray E., Chief Special Agent, San Francisco, Cal.
Buchanan, J. E., Ex-Chief, Winnipeg, Canada
Brun, M. J., Fort Smith, Ark.
Brennard, Charles J., San Francisco, Cal.
Bogardus, George W., Norwalk, Conn.
Baker, Philip, Ex-Chief, Portchester, N. Y.
Bower, George M., Rome, N. Y.
Brookins, L. C., Norwick, N. Y.
Beckert, E. G., West New York, N. J.
Becker, Harry J., South Orange, N. J.
Boissenin, J., Ottawa, Ill.
Brooks, Wm., Fire Marshall, Helena, Mont.
Blon, C., Jr., Holland, Mich.
Brown, Geo. K., Ponca City, Okla.
Brince, George C., Commissioner, Eveleth, Minn.
Brennan, John J., Pelham Manor, N. Y.
Boulden, D. A., Winnipeg, Can.
Bogan, R. A., Baton Rouge, La.
Boughner, George, Grand Rapids, Mich.
Bicker, W. R., Pensacola, Fla.
Brown, E. J., Binghamton, N. Y.
Bethancourt, A. J., Houma, La.
Bernard, Rene, Thibodaux, La.
Burbach, Peter H., West Allis, Wis.
Belfy, N., Muskegon, Mich.
Bangarter, Ben E., Mankato, Minn.
Bartlett, H. C., Oxford, N. Y.
Bernard, Henry, Ex-Chief, Grafton, N. D.
Behrens, Louis, Charleston, S. C.
Birkett, George C., Portchester, N. Y.
Boyle, Roger, Jersey City, N. J.

Corcoran, D. J., Superintendent, Milwaukee, Wis.
Campbell, H., Irvington, N. J.
Connell, Thos., Cleveland, Ohio
Conway, J. J., Superintendent, Cincinnati, Ohio
Champ, William, Sherburne, N. Y.
Cote, A. J., Woonsocket, R. I.
Clark, L. H., Cloquet, Minn.
Canfield, A. B., Pocatella, Idaho
Carter, Peter B., Ex-Chief, Camden, N. J.
Chevalier, J. F., Inspector, Montreal, Que.
Churchill, J. W., Halifax, N. S.
Code, Wm., Ex-Chief, Winnipeg, Canada
Copper, W. P., Richmond, Cal.
Curran, W. J., Indianapolis, Ind.
Cavanaugh, P. J., Philadelphia, Pa.
Crook, George W., Assistant Chief, Devils Lake, N. D.
Clark, M. E., Williamsport, Pa.
Chambles, C. S., Commissioner, Elizabeth, N. J.
Conley, Louis J., Deputy Chief, Pittsburgh, Pa.
Callahan, A., Harrison, N. J.
Charlesworth, Frank, Providence, R. I.
Chamberlain, Albert, Hillside, N. J.
Craswell, Wm. T., Valley City, N. D.
Correll, L. E., Casselton, N. D.
Clark, Charles E., Wayne, Pa.
Carter, John E., Galesburg, Ill.
Corrigan, M. J., Chicago, Ill.
Coates, H. G., Walkerville, Ont.
Copeland, D. B., Columbus, Ga.
Coyle, Thomas, Paterson, N. J.
Cameron, A. D., Fort William, Ont.
Callahan, H. J., Fort Dodge, Iowa
Dunn, E. J., Plainfield, N. J.
Donovan, D. F., Kansas City, Mo.
Donald, L. F., Jackson, Mich.
Delfs, Hugo, R., Lansing, Mich.
Dailey, C. S., Bemidji, Minn.
Dunn, O. C., St. Paul, Minn.
Decker, F. C., Westfield, N. J.
Darling, E. C., Englehart, Ont.
Davis, Ross B., Philadelphia, Pa.
De Courcey, D. H., Winchester, Mass.
De Castro, M. F., Captain, Panama City.
Dickinson, F. F., Brockton, Mass.
Doolittle, Ralph F., Fairmont, W. Va.
Dutton, A., Edmonton, Alta.
Deen, Frank, Lancaster, Pa.
DeMay, S. J., Detroit, Mich.
Derringer, E. A., Superintendent, Columbus, Ohio
Deacon, G. Y., Lachute, Que.
Duncan, James M., Jr., Alexandria, Va.
Donnelly, L., Quebec
Diederich, G., Master Mechanic, Kansas City, Kan.
Dressler, Fred, Redbank, N. J.
Dewar, G. W., Havre, Mont.
Davies, E. N. C., Haddon Heights, N. J.
Dodd, S. H., Los Angeles, Cal.
Derra, A. G., Schenectady, N. Y.
Dessin, W. J., Burlingame, Cal.

Egner, John C., Kansas City, Mo.
Espey, John H., Elmira, N. Y.
Erwin, C., Commissioner, Cloquet, Minn.
Evans, John M., New Orleans
Fowler, Joe, Ex-Chief, Sudbury, Ont.
Fuller, W. T., Transcona, Man.
Fox, Henry A., Boston, Mass.
Francis, Harry J., New Brunswick, N. J.
Ferrie, P. T., Cleveland, Ohio
Fetters, J. I., Michawaka, Ind.
Fearn, O. E., Chief (Apparatus), Washington, D. C.
Ferguson, S., Fort Worth, Texas
Funderburk, W. H., Springfield, Ill.
Faithfull, J. E., Saskatoon, Sask.
Fehr, Geo. S., Freedom, Pa.

Gardiner, D., Powell River, B. C.
Gibbs, J., Montclair, N. J.
Green, W. C., Concord, N. H.
Gilday, J. J., Captain, Jersey City, N. J.
Gerstung, August, Chief, Elizabeth, N. J.
Grogg, John A., President, Ohio Fire Chiefs' Association, Tiffin, Ohio
Gibson, John, Mount Vernon, N. Y.
Ginther, C. E., Rochester, Minn.
Gates, E. J., Glenns Falls, Cal.
Gauthier, R., Montreal, Que.
Goff, George B., Oklahoma City
Goldsmith, Clarence, Assistant Chief Engineer, Chicago, Ill.
Gamber, John G., Ex-State Fire Marshal, Evanston, Ill.

Higham, Charles, Ex-Chief, Middletown, N. Y.
Haggard, L. C., Commissioner, Claremore, Okla.
Haper, E. E., Commissioner, Pensacola, Fla.
Harrington, R. N. O., Montreal, Que.
Haymes, R. J., Claremore, Okla.
Heath, Thomas, Saskatoon, Sask.
Hewitt, Elmer, N. Wildwood, N. J.
Hull, Charles E., Audubon, N. J.
Hedden, George W., Buffalo, N. Y.
Heitman, H., Waterbury, Conn.
Hawkins, W. H., Haverill, Mass.
Hyatt, Henry J., Pittsburgh, Mass.
Harvey, C., Long Branch, N. J.
Huber, Charles, Endicott, N. Y.
Harris, G. A., Commissioner, Elizabeth, N. J.
Hurley, W. J., Holyoke, Mass.
Hansen, Henry L., Rinelander, Wis.
Henryson, E. F., Elgin, Ill.
Hofstetter, A. N., Fire Marshal, Evanston, Ill.
Hansen, S. H., Duluth, Minn.
Hansen, Louis, Lincoln, Neb.
Henley, James B., Keewatin, Minn.
Healy, John F., Denver, Col.
Hanson, F. W., Rush City, Minn.
Henry, C. J., Lexington, Ky.
Hurley, J. P., Springfield, Mo.
Hirsch, Fred S., Battalion, Los Angeles, Cal.
Hoskin, Edward C., Highland Park, Ill.
Herald, George, Ex-Chief, Los Angeles, Cal.
Hardy, Wm., Lethbridge, Alta.
Houren, G. M., Winnetka, Ill.
Huffstetler, Glenn, Maryville, Tenn.
Hutchinson, L. N., Commissioner, Dearborn, Mich.
Harris, S. H., Battle Creek, Mich.
Hirschley, Claude M., Chife Engineer, Hillsborough, Cal.

Ingram, C. L., Montgomery, Ala.
Ingold, Wm. F., Edgewater, N. J.

James, W. G., Hamilton, Ont.
Johnstone, C. M., Knoxville, Tenn.
Johnson, H. A., Ventura, Cal.
Jesser, F. C., Covington, Va.
Jenkins, T., Yorkton, Sask.
Jenkins, C. E., Ex-Chief, Bryan, Texas
Jones, Robert, Chattanoo, Tenn.
Johnson, J. E., Menomic, Wis.
Jucksch, J. C., Schumacher, Ont.

Kuhn, Frank W., Pontiac, Mich.
Kappelle, A. S., Stratford, Ont.
Kuplic, J. J., Manitowoc, Wis.
Kennedy, John B., Augusta, Ga.
Krohn, Adolph, International Falls, Minn.
Kelley, R. A., Davenport, Iowa
Kerner, L. P., Jr., Rio Vista, Cal.
Knoblock, R. A., South Bend, Ind.
King, Harry A., East Cleveland, O.
Kellogg, George M., Sioux City, Iowa
Kelly, J. H., Ex-Chief, Grafton, N. D.
Kennedy, M. T., West Orange, N. J.
Koeber, George E., Bloomfield, N. J.
Keegan, J. T., Newark, N. J.

Lyon, A. H., Ex-Chief, Binghamton, N. Y.
Lamm, Otto, Assistant Chief, Mankato, Minn.
Lutz, William J., Wilmington, Del.
Lockhart, George, Minneapolis, Minn.
Lawton, Joseph S., Newport, R. I.
Lefeber, J. C., Jr., Wauwatosa, Wis.
Lewis, Edmund B., Scranton, Pa.
Lind, Olander, Kansas City, Kan.
Larson, Charles L., Coleraine, Minn.
Leonard, M. P., Erie, Pa.
Laird, W. F., Summit, N. J.
Lester, E. F., Athens, Ga.

Moore, John T., Memphis, Tenn.
Mohr, W. J., Santa Monica, Cal.
Morris, L. R., Ames, Iowa
Merkle, Fred G., Commissioner, Mount Vernon, N. Y.
Munroe, John H., Savannah, Ga.
Marsh, A., Columbia, S. C.
Muirhead, Charles, Danville, Ill.
Michaelsen, Wm., Commissioner, Cliffside, N. J.
Mitchell, G. L., Ex-Chief, East Orange, N. J.
Mulcahey, James, Yonkers, N. Y.
Mesereau, S. S., Commissioner, Endicott, N. Y.
Morris, J. C., Commissioner, Fairmont, W. Va.
Maxson, R. A., Gloversville, N. Y.
Magrath, Ed., Commissioner, Winnipeg, Man.
Montmeny, Arthur, Chicopee, Mass.
Mead, A. E., Grafton, N. D.
Mottesheard, R. E., Dearborn, Mich.
Marriott, George C., Quincy, Ill.
Mills, H. J., Richmond Hill, Ont.
Miller, E. E., Richmond, Ind.
Mahoney, Thomas H., Westfield, Mass.
Marechal, L., West Mount.
Melhuish, J. M., Brandon, Man.
Mathieson, R. J., Kirkland Lake, Ont.
Mastin, F. W., Pine Falls, Man.
Mesner, R. O., Canton, Ohio
McIllhargey, Charles, Hibbing, Minn.
McNamara, Mr., Commissioner, Winnipeg, Man.
McNulty, J. T., St. Petersburg, Fla.
McCartin, P. D., Colorado Springs, Col.
MacMillan, H. R., Jacksonville, Fla.
McLaughlin, William, Bayonne, N. J.
McMillon, J., Orange, N. J.
McGinley, C. A., E. Orange, N. J.
McGillan, George P., Appleton, Wis.
McCarthy, John W., Corning, N. Y.
MacDonald, J. A., Trail, B. C.
McLeod, H., Port Arthur, Ont.
McNulty, Wm. F., Carbondale, Pa.
McAuliffe, Frank, Ch. of Patrols, Chicago.
McAllister, E. H., Morrestown, N. J.
McCarthy, C. L., Worcester, Mass.
MacWhirter, J. H., Eveleth, Minn.
McFarlane, John, Montreal, Que.

Nelson, W. D., Ex-Assistant Chief, Dundas, Ont.
Nelson, W. T., Assistant Chief, Keewatin, Minn.
Norman, Ole, Superior, Wis.
Neville, R. C., Assistant Chief, College Park, Ga.
Noll, Chris W., Poughkeepsie, N. Y.
Neill, W. O., Weehawken, N. J.
Nixon, William, Newburgh, N. Y.
Nice, A. E., Columbus, Ohio
Newton, Arthur, E. Chicago, Ind.
Noble, P. L., Manhattan, Kan.
Nickerson, Charles L., Wildwood, N. J.

O'Brien, John J., Battalion Chief, Indianapolis, Ind.
O'Donnell, Jas. T., Chief Salvage Corps, St. Louis, Mo.
O'Leary, J. J., Minot, N. D.

Patt, Irwin, F., Ex-Chief, Central Falls, R. I.
Pierce, K., Kearny, N. J.
Prementine, Joseph, Lyndora, Pa.
Fenhalle, H. R., Commissioner, Dearnborn, Mich.
Partin, W. F. C., Meridian, Miss.
Palmer, W. H., Charlotte, N. C.
Price, E. H., Flint, Mich.
Phillips, A., Sault Ste. Marie, Ont.
Phillips, W. J., Sault Ste. Marie, Ont.

Quist, N F., Virginia, Minn.

Reinisch, Wm. F., Lawrence, Kan.
Rouse, E. H., Orange, Va.
Remley, N. B., Moorehead, Minn.
Royce, C. W., Joliet, Ill.
Readman, R. E., Fort Francis, Ont.
Rahn, Arthur J., Two Rivers, Wis.
Rigsby, A. E., Assistant Chief, Knoxville, Tenn.
Robson, F. C., Cando, N. D.
Rakestraw, C. A., Captain, Chattanooga, Tenn.
Rausch, Louis M., Meenah, Wis.
Ridley, A. V., Teaneck, N. J.
Rapp, C. W., Logan, Utah
Reif, Lawrence E., New Haven, Conn.
Roddy, Frank, Monroe, La.
Ritchey, G. M., Winnipeg, Can.
Ringer, C. W., Minneapolis, Minn.

Sutherland, J. W., Fargo, N. D.
Smith, J. N., Prince Albert, Sask.
Sloan, W. A., Sioux Falls.
Smart, James, Calgary, Alta.
Smith, P., Swift Current, Sask.
Stroh, F. J., Sturgeon Bay, Wis.
Summers, Claude, Norman, Okla.
Seeley, W. M., Middletown, N. Y.
Schaller, Frank J., Port Huron, Mich.
Scott, R. J., Los Angeles, Cal.
Schwab, Chris G., Deputy Chief, Oklahoma City, Okla.
Schier, F., Union City, N. J.
Sullivan, E. F., Syracuse, N. Y.
Stahlhut, John C., Fort Wayne, Ind.
Smith, Frank E., E. Newark, N. J.
Steinkellner, Peter, Milwaukee, Wis.
Smith, Richard Lee, Pittsburgh, Pa.
Sullivan, James C., Lowell, Mass.
Soper, A. E., Mansfield, Mass.
Sargent, F. M., Sunapee, N. H.
Sheppard, W. C., Pittsfield, Mass.
Sinclair, George, Toronto, Ont.
Sullivan, Joseph N., Utica, N. Y.
Saulnier, John D., North Adams, Mass.
Savage, John A., Valley Falls, R. I.
Springer, W. J., Texarkana, Ark., Tex.
Stoner, W. I., Lookout Mt., Tenn.
Stout, A. J., Hutchinson, Kan.
Stackpoole, John, Superintendent, Chicago, Ill.
Stark, W. H., Commissioner, Davenport, Iowa
Shuford, D. E., Hickory, N. C.
Schnibben, Chas., Wilmington, N. C.
Smalenberger, C., Meadville, Pa.
Schultz, Oscar K., Sharpsburg, Pa.
Smith, James E., Nashua, N. H.
Shire, Dan H., Mason City, Iowa
Spriggs, George H., Portage La Prairie, Man.
Shepperd, Fred, Honorary Life Member, New York City.

Thompson, H. A., Bismark, N. D.
Thom, A., Transcona, Man.
Townsend, John, St. Paul, Minn.
Terrell, John, Atlanta, Ga.
Timmins, Richard, Beaver Falls, Pa.

Tiller, Ray, Waterloo, Iowa
Treacy, Hubert J., New York, N. Y.
Towey, J. J., Newark, N. J.
Tawney, M. M., Harrisburg, Pa.
Taggart, W. S., Asbury Park, N. J.
Turk, Louis, Chisholm, Minn.
Thermer, Paul, Menasha, Wis.
Tappen, Robert M., Gardner, Mass.
Tierney, Daniel B., Arlington, Mass.
Tibbett, W. W., Los Angeles, Cal.
Talley, Gordon, Comissioner, Claremore, Okla.
Taplin, J. E., Blackwell, Okla.
Thompson, C. W., Vancouver, B. C.
Thompson, F. E., President, Dominion Fire Chiefs, New Liskeard
Thompson, W., St. Boniface, Man.

Villegas, Leopoldo Diaz de, Havana, Cuba.
Voshell, Harry, Indianapolis, Ind.
Volberding, L. C., Commissioner, Elgin, Ill.

Whiting, H. P., Hampton Beach, N. H.
Williamson, Edward E., Deputy Chief, Boston, Mass.
Wake, P., District Chief, Winnipeg, Man.
Waidelich, Jos., Topeka, Kan.
Watters, W. C., Oak Park, Ill.

Wigglesworth, E., Commissioner, Hackensack, N. J.
Welsh, J. P., Eau Claire, Wis.
Weir, George S., O'Hara Township, Pa.
Wells, H. B., Newberry, N. C.
Warner, F. D., New Berlin, N. Y.
Wagner, L. Ellis, York, Pa.
Wallace, George A., Cleveland, O.
Weirick, W. H., Hibbing, Minn.
Willert, C. Edw., Mt. Clemens, Mich.
Wantz, W. A., Anderson, Ind.
Wood, G. A., Niagara Falls, N. Y.
Ward, George R., Chief (District), St. Louis, Mo.
Walden, L. C., Superintendent, Worcester, Mass.
Weber, Joseph K., Stone Harber, N. J.
White, W. A., Regina, Sask.
Weeks, W. P., Battle Creek, Mich.
Willis, W. B., Outremont, Que.

Zielar, J. E., Dothan, Ala.
Zibble, W. H., Wilmette, Ill.
Ziegler, Wm., Hackensack, N. J.
Meunier, Arthur, Montreal East, Que.
Haney, T. W., Ex-Chief, Jacksonville, Fla.
Miller, John, Deputy Chief, Winnipeg, Man.
Barron, William C., Chief Inspector, St. Paul, Minn.
Johnstone, T. R., Ex-Chief, Indianapolis, Ind.
Burns,, Thomas F., Birdfort, Conn.

ASSOCIATE MEMBERS

Ahrens, John P., Cincinnati, O.
Bentzen, D. R., Minneapolis, Minn.
Browning, R. O., New York, N. Y.
Ball, C. K., New York, N. Y.
Browning, E. P., Minneapolis, Minn.
Collins, M. H., Louisville, Ky.
Coates, G. A., Atlanta, Ga.
Carmichael, Duncan A., St. Catharines, Ont.
DeLaney, J., Elmira, N. Y.

Elwood, H. D., Chicago, Ill.
Fenner, D. C., Los Angeles, Cal.

Green, Don, Chicago, Ill.

Hansen, A. E., Elkart, Ind.
Hansen, E. H., Elkart, Ind.
Havens, H. M., Columbus, Ohio
Horine, M. C., New York, N. Y.

Lovell, H. J., Boston, Mass.
Later, W. A., Toronto, Ont.

May, J. J., Elmira, N. Y.
Moulton, E. G., Worcester, Mass.
Mackie, George V., Winnipeg, Man.
Marbury, H. B., Atlanta, Ga.
McAlhone, J. P., Winnipeg, Man.

Robb, Frank L., Chicago, Ill.
Rose, C. B., New York, N. Y.
Rogers, C. A., Chicago, Ill.

Sullivan, A. G., New York, N. Y.
Snodgrass, S., Elmira, N. Y.
Scott, Glenn T., Kansas City, Mo.

Thomas, Geo. E., Toronto, Ont.
Timmerman, Roy, Atlanta, Ga.

Waterous, F. A., St. Paul, Minn.
Weber, Joe, Boston, Mass.

Adams, Carl, Minneapolis, Minn.
Ashmead, John, Hartford, Conn.
Bone, R. A., Indianapolis, Ind.
Benson, Fred E., New York, N. Y.
Bickle, R. S., Woodstock, Ont.
Beutell, O. F., New York City
Brown, A. L., New York, N. Y.
Blatchley, New Haven, Conn.
Blomberg, David, Minneapolis, Minn.
Barrett, Frank J., Minneapolis, Minn.
Bailey, F. H., Grafton, N. D.

Clitheroe, F., Toronto, Ont.
Crowhurst, A., Montreal, Que.
Crane, John A., Minneapolis, Minn.
Chnorberg, C., Providence, R. I.
Cross, J. R. Winnipeg, Can.

Dowling, F. F., Vancouver, B. C.
Doherty, J., Lowell, Mass.
Detwiller, H., York, Pa.
Dunlevy, J. C., Sioux City, Iowa
Dries, J., Winnipeg, Can.
Dynon, Daniel T., Minneapolis, Minn.

Fortin, Albert T., Minneapolis, Minn.
Flynn, James A., Chicago, Ill.
Gorham, Joseph T., Boston, Mass.
Gobert, H. F., Kansas City, Mo.
Grady, F. R., Jersey City, N. J.
Green, J. H., New York, N. Y.
Green, R. M., Alexandria, Va.
George, Clarence R., Minneapolis, Minn.
Guider, George (Alderman), Minneapolis, Minn.

Hall, William, Minneapolis, Minn.
Harris, Claud, Minneapolis, Minn.
Hauser, William M., Minneapolis, Minn.

Directors Discuss Finance

On Monday evening the Directors of the International Association of Fire Chiefs' held the regular pre-convention session. After straightening out some minor items of expense incurred in the work of the Association during the past year, the subject of the present financial status of the organization as well as future plans for increasing the Associations reserve were taken up. Suggested methods for increasing revenues were presented, and action taken for the initiation of a movement to accomplish the same.

Upon motion by Chief Joseph Sullivan, a resolution was adopted instructing the Chairman to appoint the three Directors as a committee to make recommendations with reference to the obligation of convention cities in providing, without cost, an exhibit hall, properly prepared and maintained. This action was taken as a result of the Association's receiving a bill from a convention city for construction work necessary in the exhibit hall in the form of a covering over an orchestra pit in order that exhibits might be placed thereon. The same city had also assessed the Association for janitor service and lights in the building.

The Round Table

(*Continued from page* 810)

Edmund B. Lewis, Acting Chief, Scranton, Pa.: We use a red headlight on our fire apparatus. It is my belief that a signal is of vital importance and necessary.

Fred J. Jesser, Chief, Covington, Va.: We have red driving lights and they are very necessary.

John A. Kennelly, Chief, Ridgewood, N. J.: Although we do not use redlights, I certainly believe that they are necessary.

Jack M. Byers, Chief, Hagerstown, Md.: We are just starting to install Roto Rays. With the present day traffic, distinguishing lights are necessary.

Henry A. Fox, Chief, Boston, Mass.: We use the Granite signal or Whiting light. These special signals are worth while.

August Emrich, Chief, Baltimore, Md.: Buckeye whistles and bells are used for distinguishing and warning purposes. The devices noted are absolutely necessary.

Fred Sahle, Chief, Fredonia, N. Y.: We believe that special signals or markings are worth while. We have a committee working on this matter at the present time.

James F. Noll, Chief, Harrisonburg, Va.: We do not use any special markings of any kind. I believe that the siren is best—it assists in getting the right of way.

R. A. Alexander, Chief, Portsmouth, Va.: No special marks are used but I believe that they are necessary.

George A. Barthes, Chief, Biloxi, Miss.: We use a siren and believe that it is necessary.

S. J. Flores, Chief, Shreveport, La.: No special signals are used but I believe that the right kind might be worth while.

Frank Deen, Chief, Lancaster, Pa.: No special lights are used although they would be worth while.

Frank J. Duda, Chief, Bessemer, Mich.: Special signals are necessary but they are not used here.

F. W. Reuter, Chief, Flat River, Mo.: No special signals are used but such special lights are worth while and necessary.

Conventioning is a Serious Business with these I. A. F. C. Members

Left Picture: Chief Selden R. Allen, Brookline, Mass.; Chief James Mulcahey, Yonkers, N. Y., Recording Secretary, I. A. F. C.; Chief D. W. Brownan, Albany, Ga. Vice-Pres., I. A. F. C.; Chief D. A. Boulden, Winnipeg, Canada. Center Picture: Supt. John Townsend, Bill Curran, Keegan, John Ruane, Frank McAuliffe, Chief Corrigan, Chicago; Private Jack Davies. Right Picture: R. M. Hitching, Fire Protection Engineer, Flint, Mich.; Chief S. J. DeMay, Detroit, Mich.; Chief C. J. Brennan, San Francisco, Cal.; Chief L. P. Kerner, Rio Vista, Cal.

FIRE PREVENTION ORDINANCE FOR CITIES AND TOWNS

It Establishes Bureau of Fire Prevention—Prescribes Regulations for Hazardous Materials and Processes

FOLLOWING is the continuation of a Fire Prevention Ordinance which has been prepared by the Engineers of the National Board of Fire Underwriters and is recommended by that organization for adoption by cities and towns. While it is not expected that in all cases smaller cities will find need for an ordinance of such length, it is recommended by the Board that a complete set of regulations be adopted in all cases for even though there may be no immediate need of regulation of a particular hazard, every growing community is sure to have these hazards introduced sooner or later, and it is better to be prepared for them than to develop unrestricted and then try to regulate them. The ordinance will be published in its entirety serially in FIRE ENGINEERING:

208. All explosives must be stored, used and transported in compliance with the requirements of this ordinance, and an accurate record showing the disposition of each container or package of explosives stored, transported or used shall be kept; such record to be subject to inspection by officers of the Bureau of Fire Prevention at all times.

209. (a) All factory buildings and magazines in which permissible explosives are had, kept or stored, must be located at distances from neighboring buildings, highways and railroads in conformity with the American quantity and distance table. Provided that one portable magazine containing not more than fifty pounds of explosive may be allowed if placed on wheels and located not more than ten feet from, on the same floor with and directly opposite to the entrance on the floor nearest the street level, and one portable magazine containing not more than five thousand blasting caps, may be allowed if placed on wheels and located on the floor nearest the street level.

(b) Blasting caps or detonators of any kind shall not be kept in the same magazine with other explosives.

(c) All magazines must be kept locked except when being inspected or when explosives are being placed therein or being removed therefrom.

(d) All magazines or places where explosives are stored must be kept clean and free from grit, rubbish and empty packages.

(e) Portable magazines permitted above shall be made of fireproof material or wood covered with sheet iron and shall be conspicuously marked, "Magazine—Explosives."

210. Blasting: No person shall blast or carry on any blasting operations without first having obtained a permit from the Bureau of Fire Prevention. The applicant for such permit must file a bond deemed adequate in each case by the Bureau of Fire Prevention, which bond shall become available in the payment of any damage arising from the neglect of the contractor or his agents or employees.

Portable Equipment for Fighting Forest Fires

It is not always possible to bring fire apparatus up to the seat of the blaze, when fighting forest fires. Heavy vegetation makes this impossible. Portable equipment has been developed so that the men employed at this work, can carry the necessary devices to the point where they will do the most good. The pack pump illustrated is capable of delivering thirty gallons a minute from mountain and forest streams.

Part 3. Pyrotechnics and Small Arms Ammunition

301. Pyrotechnics whenever used in this ordinance shall be held to mean any sparkler, squib, rocket, firecracker, Roman candle, fire balloon, signal lights, railroad track torpedo, flashlight composition, fireworks or other devices or composition used to obtain visible or audible pyrotechnic display.

302. No person shall have, keep, store, use, manufacture, sell, handle or transport any pyrotechnics; provided, however,

(a) That nothing in this ordinance shall be held to apply to the possession or use of signaling devices for current daily consumption by railroads, vessels and others requiring them.

(b) That the Bureau of Fire Prevention may, upon due application, issue a permit to a properly qualified person for giving a pyrotechnic display of fireworks in the public parks or other open places. Such permits shall impose such restrictions as in the opinion of the Chief of the Bureau of Fire Prevention may be necessary to properly safeguard life and property in each case.

(c) That nothing in this ordinance shall be held to apply to the possession, sale or use of normal stocks of flashlight compositions by photographers or dealers in photographic supplies.

303. Small arms ammunition whenever used in this ordinance shall be held to mean any shotgun, rifle, pistol or revolver cartridges.

304. No person shall manufacture within the limits of the city any small arms ammunition.

305. No person shall store for sale, sell or offer for sale any small arms ammunition without a permit.

Part 4. Nitro-Cellulose Motion Picture Film

401. It shall be a misdemeanor for any person, firm or corporation to sell any toy or miniature motion picture machine containing nitro-cellulose motion picture film, or to sell, lease or otherwise dispose of any nitro-cellulose motion picture films to any person not licensed by the Bureau of Fire Prevention to handle, use or display such film.

402. A permit shall be required for the storage of nitro-cellulose motion picture film in quantities greater than ten reels, or aggregating more than 50 pounds in weight. No permit shall be issued for any building unless the room or rooms in which film is handled or stored is protected by automatic sprinklers; provided that this does not include projection booths covered in Section 405.

403. Not exceeding two hundred reels aggregating not more than one thousand pounds, may be stored in approved fire-resistive cabinets, each of which shall have individual compartments vented to outer air, but not over one hundred reels may be placed in any one cabinet. Every cabinet containing in excess of fifty reels of film shall be divided into at least two distinct compartments, each compartment provided with an independent door; the separating partitions between such compartments shall be practically airtight and of substantial construction. Cabinets holding over 50 pounds of film shall be equipped with at least one automatic sprinkler for each compartment.

404. Films in excess of two hundred reels shall be stored in vented and sprinklered film vaults, in strict accordance with standard vault requirements for such purposes, and satisfactory to the Bureau of Fire Prevention.

405. Every picture machine using nitro-cellulose film shall be installed or operated within a booth, to be not less than 48 square feet in size and 7 feet high. If more than one machine is to be operated an additional 24 square feet shall be provided for each additional machine. The booth shall be built of brick, tile, or plaster blocks, plastered on both sides, or of concrete, or of a rigid metal frame, properly braced, and sheathed and roofed with sheet iron of not less than No. 20 U. S. metal gauge, or with ¼-inch hard asbestos board, securely riveted or bolted to the frame, or 2 inches of solid metal lath and Portland cement plaster. All joints shall be sufficiently tight to prevent the discharge of smoke.

(a) The entrance door into the booth shall be at least 2 feet by 5 feet, of construction equivalent to the sheathing permitted above for rigid frame booths, and shall be so arranged as to close automatically, and shall be kept closed at all times when not used for egress or ingress.

(To be continued)

Apparatus Delivered to Barnegat, N. J.—A new fire truck has been delivered to Tuckerton, N. J.

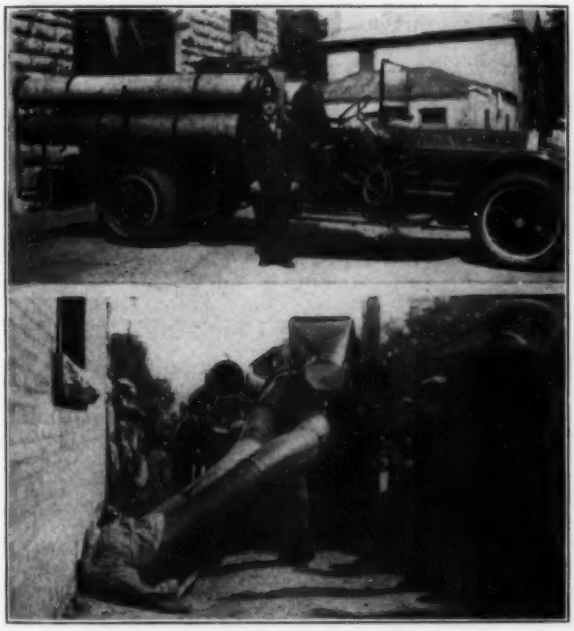
Oklahoma City Buys Asbestos Suits—Ten asbestos suits have been purchased for the Oklahoma City Fire Department.

Minneapolis Smoke Extractor

Chief C. W. Ringer of the Minneapolis fire department had on hand at Winnipeg his new smoke extractor built by his department, for clearing basements of smoke at fires.

The layout consists of a Pierce-Arrow truck on which is mounted a large blower driven by a model A Ford engine, also mounted in the truck body. A light flexible suction pipe approximately 12 inches in diameter is carried on the truck. The blower has a capacity of 2,000 cubic feet of free air per minute.

Upon rolling into a fire the suction pipe sections are connected up, inserted in a basement window or door, and the other end attached to the blower. The engine is started up and the apparatus promptly removes the excess of heat and smoke from the basement. The apparatus has proven a very valuable adjunct to the Minneapolis fire department, according to the officers who have had opportunity to watch its performance. The illustrations herewith show the unit ready to travel as well as in operation, when removing smoke from the basement of No. 3 Fire Station, Winnipeg.



Chief Ringer's "Smoke Eating" Machine

Used for removing smoke and heat from your basements during fires. (Lower) Rear view of smoke extractor, in position and ready for action at No. 3 Station, Winnipeg.

Chiefs Launch Educational Program

(*Continued from page* 819)

Friday's Session

The closing session of the convention, which took place on Friday morning, was taken up by routine business. The most important was the election of officers which resulted as follows:

President: Chief Joseph N. Sullivan, Utica, N. Y.
First Vice-president: Chief D. W. Brosnan, Albany, Ga.
Second Vice-President: Chief Richard L. Smith, Pittsburgh, Pa.
Treasurer (Re-elected): Ex-Chief Peter Carter, Camden, N. J.
Recording Secretary (Re-elected): Chief James J. Mulcahey, Yonkers, N. Y.

When it came to the choosing of the convention city for 1931, Havana, Cuba, won out over the Twin Cities (Minneapolis and St. Paul) for the honor of entertaining the association. It will be remembered that the Cuban city was a close contender at Birmingham in 1929 for this year's convention, but withdrew in favor of Winnipeg.

After this matter was decided the convention finally adjourned.

Hedden Named Director of I. A. F. C.

George W. Hedden, Fire Commissioner of Buffalo, N. Y., has just been appointed Director of the International Association of Fire Chiefs by Chief Joseph N. Sullivan, newly elected President.

George W. Hedden

Mr. Hedden was at one time a drug clerk. After working with one firm for seven years he found himself without a job. Upon the advice of friends he applied for a position with the Fire Department and the following night, at the age of twenty-one, he saw service as a substitute.

For some time after he had joined, he was tempted to resign. But after he had returned from a fire, the incidental excitement keyed up his enthusiasm for the work. However, Mr. Hedden did not leave the service. He became assistant Chief in 1918, and in April, 1924, was named head of the Fire Department to succeed Chief Edward P. Murphy. Chief Hedden was later appointed Fire Commissioner.

Eureka Introduces New Coupling

Among new developments displayed at the Exhibit Hall of the Winnipeg convention was a coupling designed for fire hose, and which, in so far as outward appearance is concerned, is a radical departure from anything at present on the market.

It is particularly easy to connect, it is sturdy, and it affords no opportunity for catching in projections when being snaked out of a hose body along the ground to a fire. It weighs but two ounces more than the types of couplings now commonly used, despite its added strength. Both female and male ends of coupling are built in the form of octagonal nuts and spanners used are a type of wrench.

The coupling has been placed on the market by the Eureka Fire Hose Manufacturing Company of New York.

Washington, N. J., to Have Fire Alarm—A fire alarm system consisting of twenty-two fire alarm boxes will be installed in Washington, N. J.

Chicago Heights Has New Ladder Truck—A Mack ladder truck has been placed in service in Chicago Heights Ill. Members of the former volunteer department started agitation for the purchase of the ladder truck.

New Type of English Fire Apparatus

A new type of pumper with a range of 250-300 Imperial gallons a minute has been constructed by Simonis Ltd., of London, England. The apparatus is mounted on a Thornycroft chassis. The pump is a three-stage turbine pump and is equipped with a patent positive priming stage, continuously driven by the turbine shaft.

PROPOSED IMPROVEMENTS

Youngstown, Ohio—Reports state that W. T. Filmer, Chairman of the Chamber of Commerce, was asked that additional fire apparatus be purchased in order to afford the city adequate protection.

Steubenville, Ohio—City Council considering site for proposed new central fire station, according to reports. Hobart O. Bradstreet, Safety Director.

Spring Valley, Ill.—At recent election town voted in favor of two-mill tax for purchase of a pumper for the fire department. Edward Fehr, Chief of Fire Department.

Marinette, Wis.—Marinette County Board urging purchase of two trucks for fire protection in county, according to reports.

Waco, Tex.—Site being sought by City Commission for the new central fire station to be built. $70,000 available.

Waverly, Iowa—Funds are being raised by fire department for purchase of chemical truck for rural fire protection.

Auburn, Maine—The erection of a fire station in East Auburn is to be considered when next city budget comes up for action, according to reports.

Owensmouth, Calif.—Chamber of Commerce urged council to commence immediately construction of fire station.

Hollywood, Calif.—Reports state authority was granted to fire commission to expend $20,000 from budget allowance for fire hydrant installation. Money not available until Dec. 15th.

Kansas City, Mo.—Recommendations for expenditures of $1,350,000 for the fire department for new building, equipment and additional men, were made at meeting of fire subcommittees of public safety group, according to reports.

La Grande, Oregon—Fire Chief C. T. Lindsay recommended the purchase of a 500-gal pumper.

Greensboro, Penn.—Greensboro Volunteer Fire Department planning purchase of a pumper, according to reports.

CONVENTION DATES

Sept. 16-17—IOWA FIREMEN'S ASSOCIATION. 53rd Annual Convention, Boone, Ia. Secretary, Paul Soener, Independence, Ia.

Sept. 16-18—MASSACHUSETTS STATE FIREMEN'S ASSOCIATION. 51st Annual Convention, Pittsfield, Mass. Secretary, Daniel J. Looney, Room 1043, Old South Bldg., Boston, Mass.

Sept. 19—NEW JERSEY STATE FIRE CHIEFS' ASSOCIATION. Annual Meeting, New Atlantic Auditorium, Boardwalk, 8 p.m. Secretary, Fred. A. Trowbridge, 17 South Street, Morristown, N. J.

Sept. 19-20—NEW JERSEY STATE FIREMEN'S ASSOCIATION. 53rd Annual Convention, Auditorium, Atlantic City, N. J. Secretary, William Exall, Chamber of Commerce Bldg., Newark, N. J.

Sept. 23-25—NATIONAL ASSOCIATION OF POLICE AND FIRE SURGEONS and Medical Directors of Civil Service Commissions. 9th Annual Convention, New York City, President, Dr. Harry M. Archer, Honorary Medical Officer, N. Y. F. D.; Secretary, Dr. Arthur Wildman, New York Municipal Civil Service Commission, New York City.

Sept. 24-25—MISSOURI STATE FIREMEN'S ASSOCIATION. Annual Convention, Trenton, Mo. Secretary-Treasurer, M. J. Mulvoy, 3500 S. Grand Boulevard, St. Louis.

Sept 29-30—TEMISKAMING FIREMEN'S ASSOCIATION. Seventh annual convention, New Liskeard, Ont., Canada. F. E. Thompson, Secretary-Treasurer, New Liskeard, Ont.

Sept. 29-Oct. 3—NATIONAL SAFETY COUNCIL. 19th Annual Safety Congress, William Penn and Fort Pitt Hotels, Pittsburgh, Pa. Managing Director, W. H. Cameron, headquarters, 20 North Wacker Drive, Chicago, Ill.

Oct. 7-9—FIREMEN'S ASSOCIATION OF THE STATE OF PENNSYLANIA. 51st Annual Convention, Hotel Americus, Allentown, Pa. Secretary, Charles E. Clark, 411 Bellevue Avenue, Wayne, Pa.

Oct. 8-9—WISCONSIN STATE FIRE CHIEFS' ASSOCIATION. 2nd Annual Convention, Sheboygan, Wis. Secretary, Chief Arthur J. Rahn, Fire Department, Two Rivers, Mich.

Oct. 15—FIRE CHIEFS' EMERGENCY PLAN OF WESTCHESTER COUNTY. Regular meeting and Mayors' Night. Fire Headquarters, Mt. Kisco, N. Y. Secretary-Treasurer, E. Riviere, Fire Headquarters, Larchmont, N. Y.

Oct. 21-23—NEBRASKA STATE VOLUNTEER FIREMEN'S ASSOCIATION. 49th Annual Convention (2d in year), Scottsbluff, Neb. Secretary-Treasurer, H. A. Webbert, Kearney, Neb.

Oct. 21-23—RAILROAD FIRE PROTECTION ASSOCIATION. 17th Annual Convention, St. Louis, Mo., Secretary-Treasurer, R. R. Hackett, Baltimore & Ohio R. R., Baltimore, Md.

November—SONOMA COUNTY FIREMEN'S ASSOCIATION. Annual Convention, Petaluma, Cal.

May 11-16, 1931—NATIONAL FIRE PROTECTION ASSOCIATION. 35th Annual Meeting, Toronto, Ont., Can. Managing Director, Franklin H. Wentworth, 60 Batterymarch St., Boston, Mass.

May 21, 1931—IOWA STATE FIRE CHIEFS' ASSOCIATION. Annual Convention, Ames, Iowa. Secretary-Treasurer, Chief L. R. Morris, Ames, Ia.

New York City Orders Pumpers—New York City has placed an order for seven 700-gallon Mack pumpers to be delivered within sixty days.

Mishicot to Charge for Protection—In order to do away with donations and free-will offerings, Mishicot, Wis., will charge property owners of the vicinity three dollars a year for fire protection. Subscribers will receive placards "Protected by the Mishicot Fire Department."

N. Y. Tests Long Pole Acetylene Burner

Members of the crew of Rescue Co. No. 1 of the New York Fire Department have demonstrated that iron shutters on windows of buildings afire can be cut with an acetylene torch at a distance of twenty-five feet by using a straight-tip burner (instead of a bent-tip) on a slender pole extended across a shaft or from a nearby window or fire escape.

An iron hinge three and a half inches wide by three-quarters of an inch thick was severed in two minutes and seven seconds and a lighter iron hinge one and one quarter inches wide by three-eighths of an inch thick and cut in two in forty-eight seconds at a distance of twenty-five feet from the object under attack.

Chief Thomas F. Dougherty and Battalion Chief Walter Lamb, a former commanding officer of the Rescue Company, witnessed the test and expressed satisfaction with the results.

Fire Commissioner John J. Dorman when shown photographs of the test, ordered the Fire Department Repair Shops to manufacture additional torch holders of similar length for service on the Rescue trucks. The need for long-reach torches was recently manifested at a fire in a warehouse without fire escapes and too remotely located from other buildings to make contact with the iron shuttered windows by means of the standard length torches. Assistant Chief Dougherty, in charge of the fire, suggested to Capt. Cornell M. Garety, of Rescue Company No. 1, that he experiment with a longer type of torch. Fireman John C. Connors, a bridgeman and iron worker before he became a fireman, undertook the task and turned out a sectional pipe twenty-five feet in length. The slender pipe is supported by a guy rope to steady the pole while in action.

WM. JEROME DALY.

History of Monhagen Company Published

Each fire company at least once a year elects the full roll of officers from a president down to a historian. But in most fire department groups the historian does about as much work as the third vice-president, and so considerable data of historical value is lost.

Not so with the Monhagen Hose Company of Middletown, N. Y. Frank W. Elliott, actively associated with the affairs of this company, has written and published a book "Three Score Years," in which is recorded the events of this fire organization from 1869 to the present period.

There are many bits of interesting information in the book, and even though a great deal of it relates to local events and persons, any one who has enjoyed the thrill of running to fires will find it entertaining. Early American fire companies appear to have an almost common background—it was necessary to organize, to raise funds, to purchase apparatus and to meet local opposition. And so in reading the history of the Monhagen Hose Company, it may even form a more or less chronological record of other volunteer organizations.

The illustrations that appear in the book indicate the great strides that have been made in fire departments during "Three Score Years."

N. N. W.

Lansing, Mich., to Erect Fire Station—Contracts have been awarded for the construction of a fire station in the eighth ward of Lansing, Mich.

Fire House Opened in South Bend, Ind.—A new fire station, costing $40,000, was formally opened in South Bend, Ind. This makes the eleventh fire house in the city.

Alhambra, Cal., to Erect Fire House—Alhambra, Cal., is looking for a site on which to erect a new fire station. The improvement was approved in June but so far no suitable site for the building has been found.

Ex-Chief of Joplin, Mo., Dead—Frank Zellers, Chief of the Joplin, Mo., Fire Department from 1905 to 1918, died at his home at the age of sixty-eight. He was one of the few survivors of the old volunteer days.

Spokane, Wash., Constructing Station—A new fire station is being constructed in Spokane, Wash., to replace one of the sixteen stations now in service. The city plans to purchase an 85-foot aerial ladder some time this fall.

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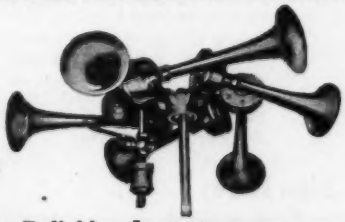

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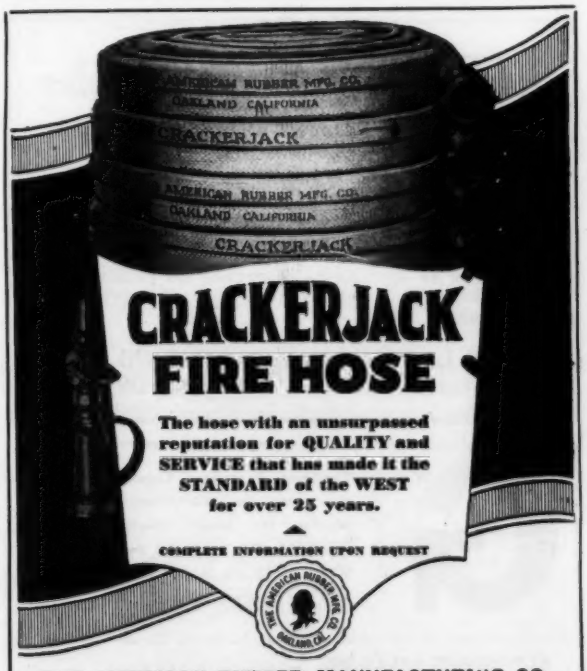

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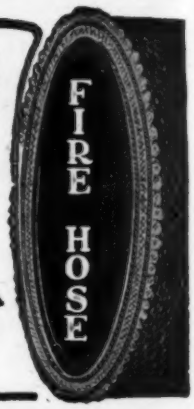

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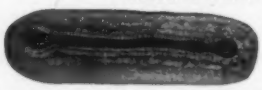

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Attitude of Courts Toward Fire Laws

(*Continued from page* 804)

estimated by its city council that the cost of supplying such necessities would be $15,000, which could not be paid out of the 1929 revenue for the city because all of it had already been appropriated. Moreover, this expenditure for the necessary improvements would exceed the revenue that could be provided during the year.

The city council, on September 3, 1929, unanimously passed an ordinance calling an election to be held on the regular election day for the purpose of permitting the voters of the city to determine whether it should issue its bonds to the amount of $15,000 in order to raise the necessary revenue for the purposes indicated. At the election more than two-thirds of those voting upon the subject were in favor of the issual of the bonds. The council then passed another ordinance setting out the denomination of the bonds, the dates and periods of their payment, etc., with the rate of taxation on the assessed property within the city, and also providing for the advertisement of bids for the purchase of the bonds and other incidental matters not involved in this litigation.

At the sale for the bonds a man named Kern was the highest bidder. He offered a premium of $600 for the entire issue, making the total sum of $15,600, and it was accepted by the city.

The bonds were duly prepared by the city and they were tendered to Kern as the successful bidder but he declined to pay the amount of the bid, or to accept the bonds, upon the ground that the ordinance calling the election provided that the proceeds of the bonds should be used "for the purpose of purchasing fire equipment apparatus"; while the notice of the election, and the question submitted to the voters on the ballot, were in this language: "Are you in favor of issuing fifteen thousand dollars in bonds for the purpose of purchasing fire equipment apparatus to extinguish fires in the City of Mt. Sterling, Kentucky, and to make such repairs and changes in the City Building as will be necessary to properly install and care for said fire-fighting equipment, when purchased?"

Kern contended that the transaction was invalid because the ordinance which called the election was for the single purpose of purchasing fire-fighting equipment, while the question propounded to the voters authorized the expenditure of the funds to be derived from the bond issue for the additional purpose of making "such repairs and changes in the City Building as will be necessary to properly install and care for said fire-fighting equipment, when purchased." Kern argued that his view was correct because a state law clearly provides that money obtained from a sale of bonds by a municipality cannot be used for a purpose different from that for which it was voted.

Notwithstanding this contention the lower Court held the bond issue valid, thus compelling Kern to accept and pay for the bonds, stating the following important law:

"If the law should be determined that the funds of the involved indebtedness herein could not be spent for any other purpose than the purchasing of fire extinguishing equipment, it seems to us it could not affect or militate against the duty of defendant (Kern) in this case to pay for the bonds, which is the only question involved, and which is quite beside the one as to the purposes for which the proceeds when so paid may be expended by the city."

On the other hand, it is important to know the distinction made in the case of Louisville, 229 Ky. 325. Here the city had previously issued $5,000,000 bonds under a statute allowing the issual thereof "for the proper accommodation of the schools of such city to purchase a site or sites or to erect school houses for the high schools or for the other schools, or to purchase land for the enlargement of existing school yards, or for any or all these purposes."

A surplus of the voted indebtedness under that statute existed, and the question involved was whether that surplus could be legally expended in the furnishing of school equipment to certain designated city schools. The Court held that it could *not* be done, since the purpose of the creation of the bonded indebtedness was confined to the objects and purposes set forth in the quoted statute and that it would be a diversion of such funds to apply any portion thereof to the equipment of schools, as was proposed to be done by the city board of education.

Therefore, an important distinction exists between funds for school purposes and expenditures necessary to maintain a city fire department.

Validity of Civil Service Laws Giving Preference to Discharged Soldiers and Sailors

Considerable controversy has existed from time to time whether laws are valid which give preference to discharged soldiers, sailors and marines in appointments for civil service positions. It is interesting to observe that in almost all instances such laws have been declared valid and enforceable.

Probably the most important case involving this point of the law is Cook vs. Mason, 283 Pac. 891, decided during the past few weeks. The facts of this legal controversy are that a man named Cook, who was neither a discharged soldier, sailor nor a marine, took the civil service examination for the position of fireman of the city. As a result of this examination Cook received an average grade of 94.03 per cent, the same being the second highest grade received by any applicant. Seventeen other applicants, all of whom were honorably discharged soldiers, sailors, or marines, passed this examination with a grade higher than 70 per cent. Cook did not claim that he was an honorably discharged soldier, sailor, or marine, but that his grade was good.

In placing the names of the successful applicants on the eligible list, the civil service board, instead of placing Cook second on the eligible list of persons to fill the position of fireman of the city, placed him eighteenth on the list, in view of a clause in the city charter, as follows:

"In all such tests, honorably discharged soldiers, sailors and marines . . . shall not be subject to any age limitations. If such person has attained an average percentage of 65 where the average percentage required is 70, he shall be eligible and his name shall be placed on the list above and be certified before the names of persons who have not been allowed preferences."

Cook filed suit to compel the civil service board to place him second on the eligible list. He contended that the above clause is unconstitutional, in that it conflicts with the state Constitution which provides as follows:

"No special privileges or immunities shall ever be granted which may not be altered, revoked, or repealed by the legislature, nor shall any citizen or class of citizens, be granted privileges or immunities which, upon the same terms, shall not be granted to all citizens."

Notwithstanding this provision in the Constitution, the Court upheld the civil service board's decision in placing Cook's name eighteenth on the list, and said:

"Construing this provision of the Constitution, it has been held time and again that while arbitrary discriminations by the Legislature between persons standing in the same relation to the subject of legislation will not be sustained by the Courts, it is firmly settled that a law is general and constitutional when it applies equally to all persons embraced in a class founded upon some natural, intrinsic, or constitutional distinction. . . . The employes of the fire department of the city belong to the classified service. And while there is no positive statement to that effect, presumably the civil service board, under the rules and regulations formulated by it, required the applicant to have an average percentage of 70 to entitle his name to be placed on the eligible list. . . . The recognition of the service of veterans . . . would promote that love of country and devotion to the welfare of the state which it concerns the commonwealth to foster. So, in the case under consideration, the Legislature may have, and doubtless did think, that a person who has served in the army or navy and who has been honorably discharged therefrom, had by such service acquired habits of industry, obedience, and fidelity, which are valuable qualifications for any public office or employment, and, moreover, that the recognition of this service would promote the love of country and devotion to its welfare which it concerns the state to foster."

In another leading case, Keymer, 148 N. Y. 219, where a similar point of the law was involved, the Court said:

"In all examinations, competitive and non-competitive, veterans have no preference over other citizens of the state; but when as a result of these examinations, a list is made up from which appointments can be made, consisting of those whose merit and fitness have been duly ascertained, then the veteran is entitled to a preference without regard to his standing on the list."

Power of Officer to Refuse Permit

While it is well settled that a reasonable zoning ordinance is valid and enforceable, yet an ordinance is invalid by the terms of which any one person is given power to decide whether a permit should be issued to construct or improve a building.

For example, in State vs. Woodworth, 169 N. E. 713, it was disclosed that a municipality enacted an ordinance, as follows:

"In the interest of public health, safety, convenience, appearance and general welfare the city shall be divided into three kinds of districts, viz.: residence, business and industrial. Until a zoning ordinance is passed in the city definitely defining such districts the inspector of buildings shall determine what parts of the city belongs in either of these three districts."

The inspector refused to grant to a property owner a permit to erect a gasoline filling station and the owner instituted legal proceedings contending that the ordinance was invalid because it gave to the building inspector exclusive authority to grant or refuse to grant the permit until the council enacted a zoning ordinance.

In holding the above quoted ordinance invalid, the Court said:

"A municipal council cannot delegate to another munici-

pal officer the power to decide upon legislative matters properly resting in the judgment and discretion of the council. The members of a council are chosen by the people to legislate, and the public is entitled to the judgment and discretion of those elected for that purpose, and not to the judgment and discretion of some other to whom the council may confide it. . . . In the instant case it appears that the defendant, the safety director, acting as building inspector, determined for himself and declared to himself that the street upon which the relatrix's property was located was a residence district. . . . The council was without authority pending the passage of a general zoning ordinance to confer upon the defendant the power claimed by him by virtue of section 13. That section of the ordinance is void."

Compensation Allowed for Injury

Numerous Courts have held that a fireman who has a hernia is not entitled to compensation where he is compelled to temporarily quit his employment as a result of the hernia. However, in Carr vs. Murch Brothers Company, 21 S. W. (2d) 897, a higher Court recently rendered a decision holding that a person is entitled to compensation where he suffers injury to a hernia during performance of his regular work.

In this case the employe suffered serious injuries to a hernia which he had had for several years and which was aggravated when he reached high upon the engine to turn off a valve. This Court stated the following important law:

"If an accident hurts a hernia, there is no more reason for denying compensation than if any other sound or unsound part of the body is hurt. It is merely an aggravation of a pre-existing condition and is compensable as other aggravations."

What is Disorderly Conduct?

Since in many cities firemen have authority to make arrests they frequently have occasion to distinguish disorderly conduct, which justifies the apprehension of the guilty party. Therefore, the recent case of Ruthenbeck vs. First Criminal Judicial Dist. Court, 147 Atl. 625, imparts unusually valuable legal information.

In this case it was shown that a city ordinance provides that "no person shall utter any loud, profane, indecent, lewd, abusive or offensive language in any public place."

A citizen was arrested on a warrant alleging disorderly conduct because he did in a public building, in a loud and offensive tone, exclaim, "You big muttonhead, do you think you are a czar around here?"

The Court held this offense did not constitute disorderly conduct, saying:

"A 'muttonhead,' as defined by the dictionaries, is a dull, heavy and uninteresting person. That the dignity of the clerk may have been ruffled by the language addressed to him is possible, but that it was indecent or disorderly, as defined by the legislative power conferred on the borough council, we think is not established. It is not every trivial epithet . . . that constitutes disorderly conduct."

Court Orders Reinstatement of Innocent Officer

While it is true that a member of a municipal fire department may be discharged for gross negligence in driving a municipal vehicle in collision with another machine, yet it is important to know that the discharge of a fellow officer, who was merely riding with the driver when the accident occurred, is unwarranted and the Court will order his reinstatement.

For illustration, in Strater vs. Borough of Runnemede, 147 Atl. 644, it was disclosed that a municipal driver negligently drove the vehicle at high speed, without sounding a warning signal, across an arterial highway in collision with another automobile. Both the driver and his assistant were dismissed from the municipal service. The assistant filed suit asking for reinstatement, and the Court granted this request, saying:

"We think the charge as against Peterson (driver) was amply sustained and that he was properly dismissed. To drive an automobile at night across the White Horse Pike, the chief artery of travel between Philadelphia and Camden and Atlantic City, at high speed and without warning, constituted the grossest negligence, and exhibited unfitness to hold office. Peterson, being the driver of the car, was properly dismissed. Strater (assistant), however, was a passive occupant of the car in no wise responsible for its operation. There is exhibited in the case against him no evidence of negligence, willful, gross, or otherwise. As our view is that the dismissal of Strater was illegal, he should be restored to duty."

When City is Liable for Injuries to Automobile Owners

Generally speaking, a city is not liable for injuries caused automobile owners as a result of colliding with fire department obstructions authorized by municipal ordinances, unless the obstructions are clearly dangerous.

For instance, in Phillips vs. City of Wichita, 278 Pac. 3, the driver of an automobile collided with an obstacle which was constructed in accordance with the provisions of a city ordinance. The injured driver filed suit against the city, contending its officials were negligent irrespective of the ordinance.

The lower Court held the city liable, but the higher Court reversed the decision, saying:

"The city would not be liable as for the wrongful maintenance of an obstruction in the public street unless the plan specified in the ordinance was manifestly unsafe and likely to cause injury and damage to reasonably prudent persons riding in automobiles driven at what would be a reasonable speed under the circumstances. . . . Where a street, as planned or ordered by the governing board of a city, is so manifestly dangerous that a Court, upon the facts, can say, as a matter of law, that it was dangerous and unsafe, the city should generally be held liable for any resulting injuries to individuals; but where, upon the facts, it would be so doubtful whether the city as planned or ordered by the governing board of the city was dangerous or unsafe, or not, that different minds might entertain different opinions with respect thereto, the benefit of the doubt might properly be given to the city or to the governing board that planned it, and the city held not liable."

Who Is Liable for Building Destroyed by Fire?

Frequently it is helpful for municipal fire department officials, and firemen, to understand the legal rights of parties having ownership in a building destroyed by fire.

Generally speaking, unless a contract specifies otherwise the owner of the building must bear the loss. However, under some lease contracts the lessee assumes responsibility to turn the property over to the owner in good condition at the termination of the lease contract. Under these circumstances, the owner is relieved from liability for any loss by fire. Also, although the owner has no contract which obligates his tenant to assume liability for loss by fire, the owner may sue and recover his loss from a tenant whose negligence resulted in the fire.

However, it is important to know that an insurance company cannot avoid payment of insurance by introduction of proof that the owner's or tenant's negligence caused the fire unless, of course, the fire was intentionally started.

Another important point of the law is that the majority of Courts have held that a municipality is not liable for failure to supply water or efficient equipment to put out a fire. This is true because conduction of a fire department is a governmental duty, and a city is not liable for negligence of its officials or employes who perform governmental functions.

Contractor Entitled to Payment for Work Performed on Building Destroyed by Fire

Still another common source of litigation arises from partly constructed buildings which are destroyed by fire.

Usually where a building contract does not contain an explanation of whether or not a contractor shall receive payment for work performed on a building which is destroyed before its completion, the Courts may imply that the owner agreed to pay a reasonable amount to the contractor for the work performed.

For illustration, in Robb vs. Parten, 26 N. W. 515, decided during the past few weeks, it was disclosed that a plumbing contractor agreed in writing to furnish and install all the necessary plumbing in a dwelling at a specified price. Before completion of the work the building was destroyed by fire for which neither the owner nor the plumbing contractor was responsible. The owner refused to pay the contractor for the work which he had performed. The contractor filed suit, contending that although the fire did not result from negligence of the owner, he was bound to pay for any work performed on the building.

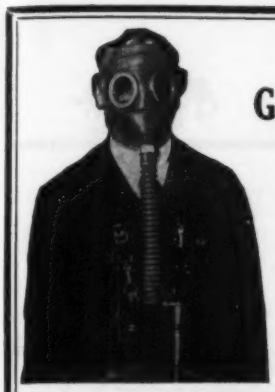
The lower Court held the contractor not entitled to a recovery, but the higher Court reversed this decision and held the owner bound to pay for the work performed by the contractor before the building was destroyed by fire, saying:

"The contract involved was implied to be made on the assumed continued existence of the dwelling house."

Apparatus Delivered to Norristown, Pa.—Mack fire apparatus was delivered to Norristown, Pa.

Department Formed in Gisbontown, Pa.—A volunteer Fire Department has been formed in Gibsontown, Pa., a steel company town. Fire apparatus is owned by the steel company.

Pumper Delivered to Burlington, Vt.—A 1,000-gallon Seagrave pumper has been delivered to Burlington, Vt. The purchase was made after the National Board of Fire Underwriters recommended that two additional pumpers be added. It is expected that the second pumper will be purchased later.



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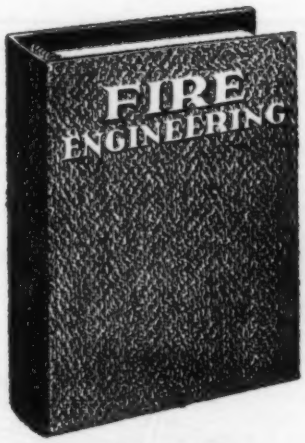

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UNBELIEVABLE

Only those who are paid once a month can appreciate the hardships of having a pay day once in thirty days. Mike was one. He had tried unsuccessfully to borrow some money from the boys who were almost as financially deficient as he was. As a taunting remark, one said:

"If you had five dollars in your pocket, what would you do?"

"I'd think I had somebody else's pants on."

And then there was the absent-minded contractor who bid seven spades on a street-paving job.

CHANGE OF STYLE

Each year the volunteer department put on some kind of show or outdoor event to raise money. This year it was a musical comedy that had played to capacity houses in New York city several years previous. Girls were needed, and many local beauties offered their services.

"Promise me one thing, Mary," said a mother to her daughter, "that if they give you a part in the chorus you will not appear in tights."

"Oh, mother, they don't wear them any more."

"Well, I'm very much relieved to hear that."

Finding hairpins in the back of the car proves only one thing: That it's a darn old car.

POINT OF VIEW

He had been injured at the Center Street fire, and for a number of days after the accident he went for medical treatment.

"Well, doctor, how am I?" he asked.

"Very well; your legs are still a bit swollen." And then to reassure the patient that he understood the case, "But that doesn't disturb me."

The patient was silent for a moment.

"I understand, doctor; if your legs were swollen, it wouldn't disturb me, either."

A golfer is a man who hits and tells.

THE MAIN ISSUE

Christmas time generally finds the boys busy repairing old and discarded toys for the benefit of the poorer children. But this good work leaves its mark. It gives the firemen a very practical viewpoint, as for example the newlywed who still considered his infant somewhat of a novelty.

One day his wife found him gazing intently at the crib. Touched by the sight she placed an arm around hubby and caressed him. He startled at the touch.

"It is incomprehensible to me, darling," he murmured dreamily. "How can they get up such a crib as that for ninety-eight cents.

YES, WHERE?

An apartment house dweller noticed the odor of smoke during the early hours of the morning. Being used to all the conveniences of apartment house life, he excitedly grabbed the phone and shouted:

"Fire! Fire!"

"Where?" asked the telephone operator.

"Here, you damn fool."

If the city would put all the fire hydrants say in one block, then there would be more parking space elsewhere.

A JUST CAUSE

A lieutenant in civilian clothes was arraigned before the judge for speeding.

"Well, what's your excuse for speeding sixty miles an hour?"

"Some one just phoned me that a member of the Ladies Auxiliary came to the fire station to announce that they were giving a rummage sale, and I was hurrying back to save my other pair of trousers."

"Case dismissed," said the Judge.

The owner of a New York hotel which burned is in jail. It is believed the fire was caused by a short circuit in the hotel's banking connections.

FOOD FOR THOUGHT

Although during his leisure moments he could be found on the golf course, it could not honestly be said that he would ever be a golfer.

"Good gracious," he remarked to his caddie, "I've never noticed so many birds before."

"You needn't worry about them," replied the caddie. "They're only following us about for worms."

A new driver wrote in to ask what stops a car skidding. Well, usually it's another car or a conveniently placed lamp-post.

THE EAR MARKS

Here is a story brought back by one who attended a state firemen's convention:

On the first free night, tiring of the excitement of a crowd of noisy firemen, he wandered into the gay section of the town for a quiet dinner and then a show. After giving his order, he waited for quite some time. Calling the waiter over, he asked:

"Waiter, have you forgotten me?"

"No sir. You're the fried fish?"

A little little detour now and then
Makes business good for tire men.

SQUELCHED COMPLETELY

Jim, in addition to a fire department training had a farm background, and was guilty of many rural tendencies. When he and his bride returned to their cozy, dark apartment, Jim would shave near the window, holding his mirror in his hand. His wife, annoyed by such indecency said that unless the practice stopped she would go to the window and cold cream her face.

"And then," she said, "what do you think the neighbors would say?"

"My dear," Jim replied, "they would say I married you for your money."

Drawing by "Art" Espey

The Guilty Culprit: "Ye Gods! Time to Change Shifts!"

YOUR CATALOG PAGE

Fire Protection Equipment and Supplies

1 Acid Siphons.
2 Adaptors for Changing Hydrant Threads.
3 Acid Jars and Rings.
4 Aerial Ladders, Detachable.
5 Aerial Trucks.
6 Alarms, Siren, Electric.
7 Alarm Systems, Industrial.
8 Alarm Systems, Municipal Telegraphic.
9 Alarms, Thermostatic.
10 Asbestos Clothing.
11 Badges, Insignias, Buttons, etc.
12 Banners, Trumpets, etc.
13 Battery Jars.
14 Battery Zincs for Fire Alarm Batteries.
15 Bells, Fire Alarm, Municipal
16 Body Equipments.
17 Boxes, Gongs, Reels, Registers, Fire Alarm.
18 Brakes, Air.
19 Brake Linings.
20 Brooms, Fire.
21 Building Materials, Fire Retardant.
22 Caps, Firemen's.
23 Chains, Non-Skid Fire Apparatus.
24 Chassis for Fire Apparatus.
25 Chemical Engines and Tanks.
26 Chimney Cleaning Compounds.
27 City Service Trucks.
28 Coats & Suits, Firemen's Quick Hitch.
29 Combination Chemical & Hose Cars.
30 Cutting & Welding Equimpent Blow Torch.
31 Cutting & Welding Equipment, Electric.
32 Deluge Sets.
33 Door Openers, Fire Station, Automatic.
34 Extinguishers, Calcium Chloride.
35 Extinguishers, Carbon Dioxide.
36 Extinguishers, Soda-Acid.
37 Extinguishers, Carbon Tetrachloride.
38 Extinguishers, Foam.
39 Extinguishers, Powder.
40 Fire Boat Nozzle Equipment.
41 Fire Department Supplies, General
42 Fire Exit Devices, Door Opening.
43 Fire Alarm Posts.
44 Fire Escapes, Portable.
45 Fire Escapes, Rigid.
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48 Flashlights, Hand.
49 Foam Liquid for Extinguishers.
50 Gas Masks and Respirators.
51 Gas & Smoke Helmets.
52 Gasoline & Oil Handling Equipment.
53 Goggles, Firemen's.
54 Helmets, Metal, etc.
55 Hose Carts, Reels & Racks.
56 Hose Clamps.
57 Hose, Fire.
58 Hose, Chemical.
59 Hose Holders.
60 Hose Jackets.
61 Hose Standardization Tools.
62 Hydrant Draining Pumps.
63 Hydrants, Fire.
64 Jacks for Fire Trucks.
65 Jacks, Shoring & Prying.
66 Ladders, Fire.
67 Lightning Arresters.
68 Motorcycles, Fire Dept. Equipped.
69 Nets, Life.
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72 Pads, Pole Hole.
73 Paints, Fire Resisting.
74 Priming Ether, Motor.
75 Pumping Cars, Standard.
76 Pumping Cars, Foam.
77 Pumps, Fire Apparatus.
78 Pumps, Fire Service, Stationary.
79 Pumps, Portable for Fire Protection.
80 Record Books, Fire.
81 Relief Valves.
82 Reviving Apparatus, Oxygen.
83 Rubber Clothing.
84 Searchlights.
85 Shingles, Fire Retardant.
86 Shirts, Firemen's Special.
87 Sirens, Apparatus & Chiefs' Cars.
88 Sliding Poles.
89 Soda & Acid Chemicals.
90 Spark Plugs, Fire Apparatus & Motorcyles.
91 Squad and other Auxiliary Cars.
92 Sprinkler Head Shut-Offs.
93 Sprinkler Supervisory Service.
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95 Sprinkler Systems, Automatic, Water.
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This page is a feature of every issue to make it convenient for you to get all this information without cost to you and without placing you under any obligation whatever to buy from any particular manufacturer.

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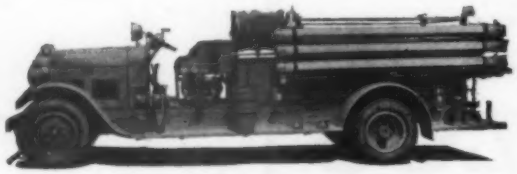

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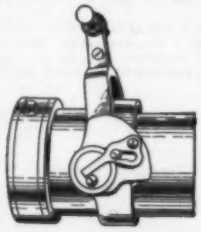

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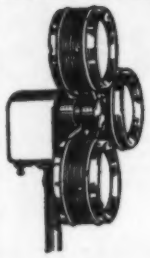

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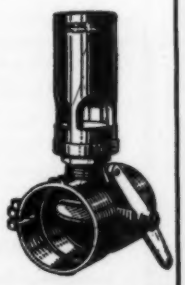

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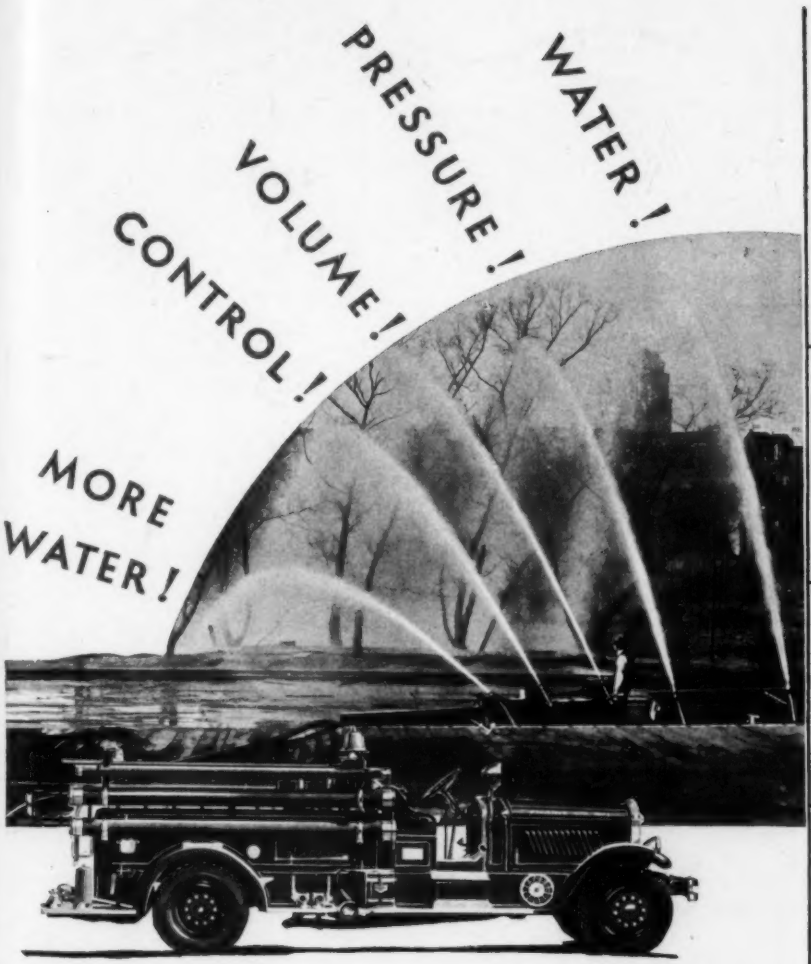

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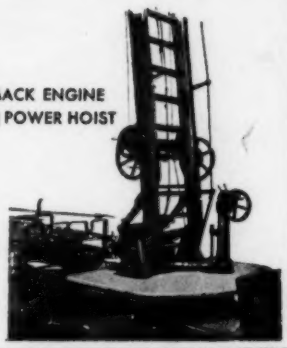

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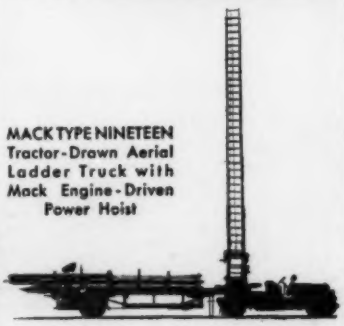

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